

=> fil reg; d stat que l27; fil capl; s l27  
 FILE 'REGISTRY' ENTERED AT 15:15:37 ON 05 MAY 2005  
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Property values tagged with IC are from the ZIC/VINITI data file  
 provided by InfoChem.

STRUCTURE FILE UPDATES: 4 MAY 2005 HIGHEST RN 849790-35-8  
 DICTIONARY FILE UPDATES: 4 MAY 2005 HIGHEST RN 849790-35-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when  
 conducting SmartSELECT searches.

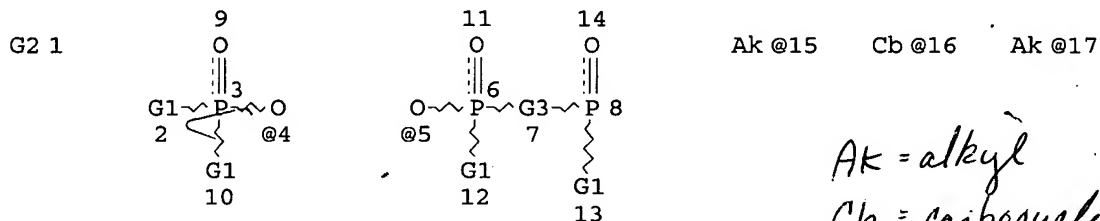
\*\*\*\*\*  
 \*  
 \* The CA roles and document type information have been removed from \*  
 \* the IDE default display format and the ED field has been added, \*  
 \* effective March 20, 2005. A new display format, IDERL, is now \*  
 \* available and contains the CA role and document type information. \*  
 \*  
 \*\*\*\*\*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
 information enter HELP PROP at an arrow prompt in the file or refer  
 to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

L1

STR



Ak-Cb  
 @18 @19

VAR G1=15/16  
 VAR G2=4/5  
 VAR G3=17/CB/18-6 19-8/18-8 19-6  
 NODE ATTRIBUTES:  
 CONNECT IS E1 RC AT 15  
 CONNECT IS E2 RC AT 17  
 CONNECT IS E2 RC AT 18  
 DEFAULT MLEVEL IS ATOM

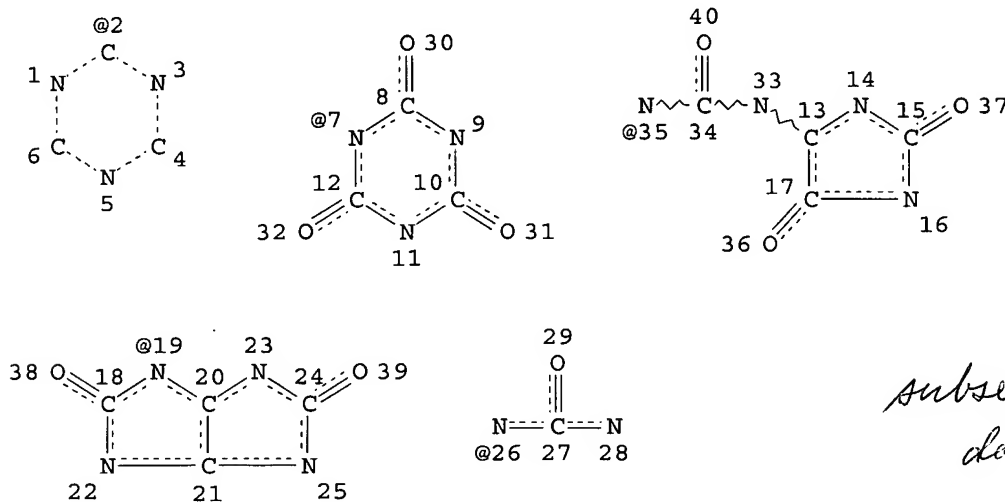
*full file search  
 done on this structure*

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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
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 NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L2 SCR 2043  
 L3 SCR 1918  
 L4 ( 1541) SEA FILE=REGISTRY SSS FUL L1 AND (L2 OR L3)  
 L5 1539 SEA FILE=REGISTRY ABB=ON L4/COMPLETE  
 L24 STR



G1 41

*subset search  
 done on this  
 structure*

VAR G1=2/7/35/19/26  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 41

STEREO ATTRIBUTES: NONE

L27 3 SEA FILE=REGISTRY SUB=L5 SSS FUL L24

100.0% PROCESSED 24 ITERATIONS  
 SEARCH TIME: 00.00.01

3 ANSWERS

*claim 26*

FILE 'CAPLUS' ENTERED AT 15:15:37 ON 05 MAY 2005  
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FILE COVERS 1907 - 5 May 2005 VOL 142 ISS 19  
FILE LAST UPDATED: 4 May 2005 (20050504/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

L28 1 L27

=> d ibib ed abs hitstr l28

L28 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:728910 CAPLUS  
DOCUMENT NUMBER: 137:248451  
TITLE: Halogen-free fire-resistant epoxy resin compositions  
INVENTOR(S): Takahashi, Yoshiyuki; Yoshizawa, Masakazu  
PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002275244	A2	20020925	JP 2001-78184	20010319

PRIORITY APPLN. INFO.: JP 2001-78184 20010319  
ED Entered STN: 25 Sep. 2002  
AB The comps. contain (A) P-containing epoxy resins derived from alkylphosphinic acids and/or alkylphosphonic acids and (B) compds. having phenolic and triazine skeletons. Thus, 8 pieces of glass fabric impregnated with a composition containing Epiclon 830S methylphosphonic acid ester (P content 3.1%, epoxy equiv 250 g/equiv) 100, phenolic resin (prepared from PhOH, melamine, and HCHO) 45, and 2-ethyl-4-methylimidazole 0.1 part were laminated and cured at 170° for 120 min to give a laminate with fire resistance (UL 94) V-0 score, peeling strength (JIS K 6481) 1.7 kN/m, interlayer peeling strength (JIS K 6481) 1.6 kN/m, moisture absorption after pressure-cooker test at 121° for 2 h 0.65%, and good solder-heat resistance.  
IT 461412-11-3P, Epiclon N 770, ester with methylethylphosphinic acid, polymer with benzoguanamine, formaldehyde, and phenol  
461412-12-4P, Epiclon N 770, ester with methylethylphosphinic acid, polymer with formaldehyde, melamine, and phenol 461412-13-5P, Epiclon N 660, ester with methylethylphosphinic acid, polymer with benzoguanamine, formaldehyde and phenol  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(halogen-free fire-resistant P-containing epoxy resin comps.

triazine-containing phenolic resin crosslinking agents)

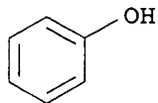
RN 461412-11-3 CAPLUS

CN Formaldehyde, polymer with Epiclon N 770 ethylmethylphosphinate, phenol and 6-phenyl-1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-95-2

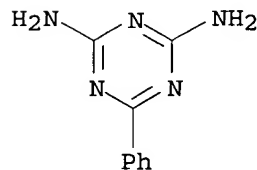
CMF C6 H6 O



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CRN 91-76-9

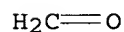
CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O



CM 4

CRN 461412-08-8

CMF C3 H9 O2 P . x Unspecified

CM 5

CRN 99241-45-9

CMF Unspecified

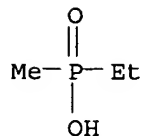
CCI PMS, MAN

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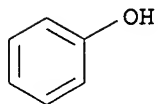


RN 461412-12-4 CAPLUS  
CN Formaldehyde, polymer with Epiclon N 770 ethylmethylphosphinate, phenol  
and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-95-2

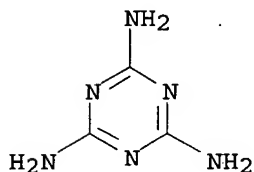
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CRN 108-78-1

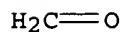
CMF C3 H6 N6



CM 3

CRN 50-00-0

CMF C H2 O



CM 4

CRN 461412-08-8

CMF C3 H9 O2 P . x Unspecified

CM 5

CRN 99241-45-9

CMF Unspecified

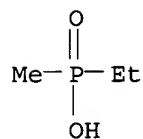
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 6

CRN 51528-32-6

CMF C3 H9 O2 P



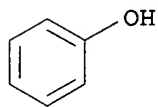
RN 461412-13-5 CAPLUS

CN Formaldehyde, polymer with Epiclon N 660 ethylmethylphosphinate, phenol and 6-phenyl-1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

CM 1

CRN 108-95-2

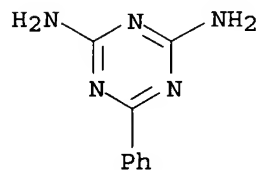
CMF C6 H6 O



CM 2

CRN 91-76-9

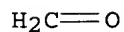
CMF C9 H9 N5



CM 3

CRN 50-00-0

CMF C H2 O



CM 4

CRN 461412-09-9  
CMF C3 H9 O2 P . x Unspecified

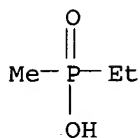
CM 5

CRN 95916-94-2  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 6

CRN 51528-32-6  
CMF C3 H9 O2 P



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=> fil reg; d stat que l23
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STRUCTURE FILE UPDATES:      4 MAY 2005  HIGHEST RN 849790-35-8
DICTIONARY FILE UPDATES:    4 MAY 2005  HIGHEST RN 849790-35-8
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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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*****
*
* The CA roles and document type information have been removed from
* the IDE default display format and the ED field has been added,
* effective March 20, 2005. A new display format, IDERL, is now
* available and contains the CA role and document type information.
*
*****
```

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

Same full file  
search

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VAR G1=15/16
VAR G2=4/5
VAR G3=17/CB/18-6 19-8/18-8 19-6
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 15
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Searched by Barb O'Bryen, STIC 2-2518

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FILE COVERS 1907 - 5 May 2005 VOL 142 ISS 19  
FILE LAST UPDATED: 4 May 2005 (20050504/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

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L12          STR
L13          SCR 2043
L14          SCR 1918
L15 (        1541)SEA FILE=REGISTRY SSS FUL L12 AND (L13 OR L14)
L16 (        1539)SEA FILE=REGISTRY ABB=ON  L15/COMPLETE
L17 (         244)SEA FILE=REGISTRY ABB=ON  L16 AND (CA OR AL OR ZN)/ELS
L18          STR
L19 (        1428)SEA FILE=REGISTRY SUB=L15 SSS FUL L18
L20 (        1426)SEA FILE=REGISTRY ABB=ON  L19/COMPLETE
L21 (         210)SEA FILE=REGISTRY ABB=ON  L20 AND L17
L22 (         114)SEA FILE=REGISTRY ABB=ON  L21 AND NC>1
L23          84 SEA FILE=REGISTRY ABB=ON  L22 AND SALT
L29          28306 SEA FILE=CAPLUS ABB=ON  ENCAPSULAT?/OBI
L31          59990 SEA FILE=CAPLUS ABB=ON  WAX/OBI OR WAXES/OBI
L32          83 SEA FILE=CAPLUS ABB=ON  PHLEGMATIZ?/OBI
L33          216 SEA FILE=CAPLUS ABB=ON  PHLEGMATI?/BI
L34          2400 SEA FILE=CAPLUS ABB=ON  POLYGLYCOL#/OBI
L35          31637 SEA FILE=CAPLUS ABB=ON  PHTHALATE#/OBI
L36          131 SEA FILE=CAPLUS ABB=ON  ESTER#/OBI (L) (PHOSPHORIC/OBI (L) AROM?/O
          BI)
L37          133 SEA FILE=CAPLUS ABB=ON  L23
L47          8 SEA FILE=CAPLUS ABB=ON  L37 AND (L29 OR (L31 OR L32 OR L33 OR
          L34 OR L35 OR L36))
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L12          STR
L13          SCR 2043
L14          SCR 1918
L15 (        1541)SEA FILE=REGISTRY SSS FUL L12 AND (L13 OR L14)
L16 (        1539)SEA FILE=REGISTRY ABB=ON  L15/COMPLETE
L17 (         244)SEA FILE=REGISTRY ABB=ON  L16 AND (CA OR AL OR ZN)/ELS
L18          STR
L19 (        1428)SEA FILE=REGISTRY SUB=L15 SSS FUL L18
L20 (        1426)SEA FILE=REGISTRY ABB=ON  L19/COMPLETE
L21 (         210)SEA FILE=REGISTRY ABB=ON  L20 AND L17
L22 (         114)SEA FILE=REGISTRY ABB=ON  L21 AND NC>1
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 L37 133 SEA FILE=CAPLUS ABB=ON L23  
 L53 13791 SEA FILE=CAPLUS ABB=ON MELAMINE/OBI (2A) L30  
 L55 1 SEA FILE=REGISTRY ABB=ON 9003-08-1  
 L56 17248 SEA FILE=CAPLUS ABB=ON L55  
 L57 6 SEA FILE=CAPLUS ABB=ON (L53 OR L56) AND L37

L12 STR  
 L13 SCR 2043  
 L14 SCR 1918  
 L15 ( 1541) SEA FILE=REGISTRY SSS FUL L12 AND (L13 OR L14)  
 L16 ( 1539) SEA FILE=REGISTRY ABB=ON L15/COMPLETE  
 L17 ( 244) SEA FILE=REGISTRY ABB=ON L16 AND (CA OR AL OR ZN)/ELS  
 L18 STR  
 L19 ( 1428) SEA FILE=REGISTRY SUB=L15 SSS FUL L18  
 L20 ( 1426) SEA FILE=REGISTRY ABB=ON L19/COMPLETE  
 L21 ( 210) SEA FILE=REGISTRY ABB=ON L20 AND L17  
 L22 ( 114) SEA FILE=REGISTRY ABB=ON L21 AND NC>1  
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 L37 133 SEA FILE=CAPLUS ABB=ON L23  
 L50 129505 SEA FILE=CAPLUS ABB=ON EPOXY RESINS/CT  
 L51 54686 SEA FILE=CAPLUS ABB=ON PHENOLIC RESINS/CT  
 L52 25 SEA FILE=CAPLUS ABB=ON L37 AND (L50 OR L51)

=> s l47 or l52 or l57  
 L58 32 L47 OR L52 OR L57

=> => d ibib ed abs hitstr l58 1-32

L58 ANSWER 1 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2005:324221 CAPLUS  
 TITLE: Flame-resistant polyamide resin composition containing  
 phenolic resin and articles made therefrom  
 INVENTOR(S): Saga, Yuji  
 PATENT ASSIGNEE(S): E. I. Dupont de Nemours and Company, USA  
 SOURCE: PCT Int. Appl., 21 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005033193	A1	20050414	WO 2004-US32625	20041001
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

## PRIORITY APPLN. INFO.:

US 2003-508540P

P 20031003

ED Entered STN: 15 Apr 2005

AB The present invention relates to a flame-resistant polyamide resin compns. for molded articles and articles formed therefrom, comprising polyamide, phenolic resin, and a flame retardant comprising phosphinate and/or diphosphinate and, optionally, melamine derivs. Further provided are articles for use in a variety of applications including elec. and electronic parts requiring elec. insulation. Thus, a flame-resistant composition was prepared by mixing Zytel FE 1111 (Nylon 66) 47 wt%, Exolit OP 1312 (flame retardant) 20 wt%, Phenolite TD 2091 (novolac resin) 10 wt%, and FT 756X (glass fiber) 23 wt%. The composition showed excellent flame retardance and good mech. properties and exhibits superb elec. insulation properties even when under high humidity conditions. In addition, the compns. can be molded without generating significant mold deposit.

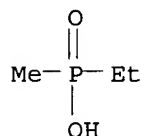
IT 176316-86-2 225789-38-8, Aluminum diethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)

(flame retardant; flame-resistant polyamide resin composition containing phenolic resin for elec. and electronic parts)

RN 176316-86-2 CAPLUS

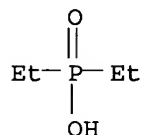
CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 2 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:324220 CAPLUS

TITLE: Flame-resistant aromatic polyamide resin composition and articles therefrom

INVENTOR(S): Marvins, Marvin Michael; Saga, Yuji

PATENT ASSIGNEE(S): E. I. DuPont de Nemours and Company, USA

SOURCE: PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005033192	A1	20050414	WO 2004-US32624	20041001
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PRIORITY APPLN. INFO.: US 2003-508506P P 20031003

ED Entered STN: 15 Apr 2005

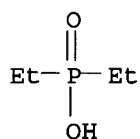
AB The present invention relates to a flame-resistant polyamide resin compns. for molded articles and articles formed therefrom, comprising aromatic polyamide with phosphinate and/or diphosphinate flame retardant and, optionally, glass fibers. Further provided are articles for use in a variety of applications including elec. and electronic parts requiring elec. insulation. Thus, a flame-resistant composition was prepared by mixing Zytel FE 1111 (nylon 66) 38.7 wt%, Zytel 330 (Nylon 6I/6T) 9.3 wt%, Exolit OP 1230 (aluminum diethylphosphinate) 22 wt%, and FT 756X (glass fiber) 20 wt%. The composition showed excellent flame retardance and good mech. properties and a high thermal tracking index and low d. In addition, the compns. can be molded without generating significant mold deposit.

IT 225789-38-8, Exolit OP 930

RL: MOA (Modifier or additive use); USES (Uses)  
 (flame retardant, Exolit OP 1230; flame-resistant aromatic polyamide resin composition for elec. and electronic parts)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



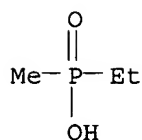
● 1/3 A1

IT 176316-86-2, Aluminum ethylmethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)  
 (flame retardant; flame-resistant aromatic polyamide resin composition for elec. and electronic parts)

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 3 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:50821 CAPLUS

DOCUMENT NUMBER: 142:135636

TITLE: Elastic covering materials with improved flame-retardant properties and a method for producing the same.

INVENTOR(S): Bauer, Harald; Deger, Hans-Matthias; Krause, Werner

PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1498449	A2	20050119	EP 2004-15722	20040703
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
DE 10331888	A1	20050217	DE 2003-10331888	20030714
US 2005011401	A1	20050120	US 2004-890068	20040713
JP 2005036230	A2	20050210	JP 2004-206242	20040713
PRIORITY APPLN. INFO.:			DE 2003-10331888	A 20030714

OTHER SOURCE(S): MARPAT 142:135636

ED Entered STN: 20 Jan 2005

AB Elastic covering materials (linoleum, thermoplastics, polyvinylchloride, rubber-gummy-combinations, cork, polyurethanes, styrene-butadiene latexes) with improved flame-retardant properties contain 0.01 - 40 weight% of a fireproofing agent comprising salts of phosphinic or diphosphinic acid, melamine derivs. and condensation products of melamine, ammonium phosphates, solid fillers. Thus, a linoleum prepared from a composition containing 40 weight% of a cement, 26.7 weight% of a chalk, 27 weight% of a wood flour, 3 weight%

of a cork flour and 0.3 weight% of a fireproofing agent Exolit OP1230 has flammability classification B according DIN 4102.

IT 9003-08-1, Formaldehyde-melamine copolymer

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(binder for cork floor covering; elastic covering materials (such as linoleum) having fireproofing agent from salts of phosphinic or diphosphinic acid, melamine derivs., ammonium phosphates and solid fillers)

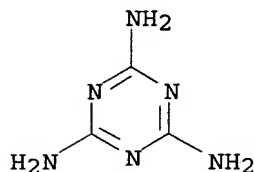
RN 9003-08-1 CAPLUS

CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

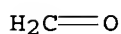
CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O

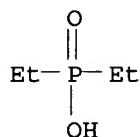


IT 225789-38-8

RL: TEM (Technical or engineered material use); USES (Uses)  
(elastic covering materials having fireproofing agent from salts of phosphinic or diphosphinic acid, melamine derivs. and/or condensation products of melamine, ammonium phosphates and solid fillers)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L58 ANSWER 4 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:50820 CAPLUS

DOCUMENT NUMBER: 142:135635

TITLE: Preparation of flame protection agent.

INVENTOR(S): Knop, Susanne; Sicken, Martin; Hoerold, Sebastian

PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

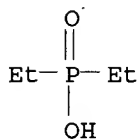
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1498448	A1	20050119	EP 2004-15724	20040703
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
DE 10331887	A1	20050217	DE 2003-10331887	20030714
US 2005014875	A1	20050120	US 2004-890427	20040713
JP 2005036229	A2	20050210	JP 2004-206241	20040713
PRIORITY APPLN. INFO.:			DE 2003-10331887	A 20030714
OTHER SOURCE(S):		MARPAT 142:135635		
ED Entered STN: 20 Jan 2005				
AB A fireproofing agent for thermoplastic molded plastics and thermosetting resins consisting of 90 - 99.9 weight% of salts of phosphinic or diphosphinic acids, 0 - 50 weight% of P- or/and N-containing compds. (such as condensation products of melamine derivs. with phosphoric or polyphosphoric acid) and 0.1 - 10 weight% of a liquid component and, optionally fillers and other additives. Thus, an unsatd. polyester resin dissolved in styrene (Palatal 340S) containing 25 weight parts of a fireproofing agent consisting of 94 weight% of aluminum diethylphosphinate (DEPAL), 1 weight% of melamine polyphosphate and 5 weight% of a liquid component (Apolit SUP 403BMT), laminated on textile exhibits an oxygen index (LOI) 39 and is stable (no indication of delamination) after keeping 1 h at 120°.				
IT 225789-38-8, Aluminum diethylphosphinate				
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)				
(fireproofing agent for thermoplastic molded plastics and thermosetting resins containing salts of phosphinic or diphosphinic acids, P- or/and N-containing compds and a liquid component)				
RN 225789-38-8 CAPLUS				
CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)				



● 1/3 A1

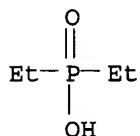
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 5 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:985908 CAPLUS  
 DOCUMENT NUMBER: 141:396319  
 TITLE: Flame retardant thermosetting resins, their use and manufacturing.  
 INVENTOR(S): Knop, Susanne; Sicken, Martin; Hoerold, Sebastian  
 PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany  
 SOURCE: Eur. Pat. Appl., 12 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1



## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1477521	A2	20041117	EP 2004-10541	20040504
EP 1477521	A3	20050126		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
DE 10321297	A1	20041216	DE 2003-10321297	20030513
JP 2004339509	A2	20041202	JP 2004-139071	20040507
US 2005004278	A1	20050106	US 2004-840972	20040507
PRIORITY APPLN. INFO.:			DE 2003-10321297	A 20030513
OTHER SOURCE(S): MARPAT 141:396319				
ED Entered STN: 18 Nov 2004				
AB The fire resistance of thermosetting resins, such as unsatd. polyesters- and epoxy resins, useful for moldings, coatings and laminates is improved by addition of a fireproofing agent consisting of a mixture of (a) salts of (di)phosphinic acid, (b) halogen-containing compds. as synergetic, and, optionally P- and/or N-containing compds., synthetic- or mineral inorg. compds. Thus, a polyamine-crosslinked epoxy resin composition (Beckopox EP140-Beckopox EH625 copolymer) containing 10 weight parts of aluminum diethylphosphinate and 10 weight parts of tetrabromobisphenol A exhibits flammability rating (UL-94, 1.6 mm) V-0 and oxygen index 0.36 compared to V-1 and 0.32 for the same composition containing 20 weight parts of aluminum diethylphosphinate.				
IT 225789-38-8, Aluminum diethylphosphinate				
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)				
(mixture of salts of (di)phosphinic acid with halogen-containing compds. as fireproofing agent for thermosetting resins)				
RN 225789-38-8 CAPLUS				
CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)				



● 1/3 A1

L58 ANSWER 6 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:957456 CAPLUS

DOCUMENT NUMBER: 141:411774

TITLE: Fireproofing polyphenylene ether resin composition and prepreg, metallic laminate, and printed circuit board prepared thereby

INVENTOR(S): Ohashi, Kenichi; Hanawa, Akinori; Murai, Yasuhiro; Aizu, Shuji

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004315725	A2	20041111	JP 2003-114120	20030418
PRIORITY APPLN. INFO.:			JP 2003-114120	20030418

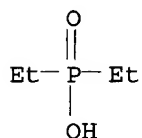
ED Entered STN: 11 Nov 2004

AB Title polyphenylene ether (PPE) composition is composed of 20-30 weight% fire retardant containing 2-5 weight% phosphorus, PPE resin having a Mn of 1000-4000, halogen-free thermosetting resin, and curing agent for the thermosetting resin. Prepreg is prepared by impregnating a substrate made from the above resin composition with varnish, and metallic foils can be laminated on both sides of the prepreg to receive metallic laminate, which can be used to produce printed circuit board. Thus, aluminum dialkylphosphate 10, PPE 20, cresol epoxy resin (ESCN 195) 45, novolak phenolic curing agent (HP 850N) 25, and other additives, such as curing accelerator and inorg. fillers, were mixed to obtain a resin composition containing 2.3 weight% phosphorus.

IT **225789-38-8**  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (fireproofing polyphenylene ether resin composition for prepreg, metallic laminate, and printed circuit board)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L58 ANSWER 7 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:732272 CAPLUS

DOCUMENT NUMBER: 141:226408

TITLE: Fireproofing dispersions for use in plastics

INVENTOR(S): Sicken, Martin; Knop, Susanne; Hoerold, Sebastian; Bauer, Harald

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Eur. Pat. Appl., 15 pp.  
 CODEN: EPXXDW

DOCUMENT TYPE: Patent

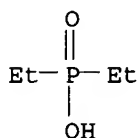
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1454949	A2	20040908	EP 2004-4108	20040224
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10309805	A1	20040923	DE 2003-10309805	20030305
JP 2004269885	A2	20040930	JP 2004-61140	20040304

PRIORITY APPLN. INFO.: DE 2003-10309805 A 20030305  
 OTHER SOURCE(S): MARPAT 141:226408  
 ED Entered STN: 09 Sep 2004  
 AB The title dispersions, useful in plastic compns. with good processability, contain (di)phosphinate salts of specified composition 1-90, P-N compds. or N-containing synergists 0-75, and liquid components 10-90%. A 25:75 dispersion (viscosity 6300 mPa-s) of Al diethylphosphinate and Alpolit SUP 403BMT (unsatd. polyester) was prepared. A cured, fiber-reinforced plate prepared from this composition had a smooth, homogeneous surface and limiting O index 0.38.  
 IT 225789-38-8, Aluminum diethylphosphinate  
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses) (fireproofing dispersions for use in plastics)  
 RN 225789-38-8 CAPLUS  
 CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

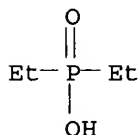
L58 ANSWER 8 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:732271 CAPLUS  
 DOCUMENT NUMBER: 141:244379  
 TITLE: Fireproofing agent-stabilizer combination for thermoplastics  
 INVENTOR(S): Hoerold, Sebastian; Schacker, Ottmar  
 PATENT ASSIGNEE(S): Clariant GmbH, Germany  
 SOURCE: Eur. Pat. Appl., 21 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1454948	A2	20040908	EP 2004-3957	20040221
EP 1454948	A3	20050202		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10309385	A1	20040923	DE 2003-10309385	20030303
JP 2004263188	A2	20040924	JP 2004-58009	20040302
US 2004227130	A1	20041118	US 2004-791624	20040302
PRIORITY APPLN. INFO.: DE 2003-10309385 A 20030303				
OTHER SOURCE(S): MARPAT 141:244379				

ED Entered STN: 09 Sep 2004  
 AB The title combinations comprise (di)phosphinic acid salts of specified structure or their polymers 25-99.9, N-containing synergists or P-N fireproofing agents 10-75, basic or amphoteric (hydr)oxides, carbonates, silicates, borates, and/or stannates 0.1-50, and phosphonites of specified structure 0-5%. A mixture of Nylon-66 54, glass fibers 30, Al

diethylphosphinate 10, melamine polyphosphate (Melapur 200) 5, Zn borate 0.5, and montan wax acid Ca salt (Licamont CaV 102) 0.5% had flammability rating (UL-94, 1.6 mm) V-0, melt index (275°/2.16 kg) 6, breaking elongation 4.8%, impact strength 61 kJ/m<sup>2</sup>, notched impact strength 9.4 kJ/m<sup>2</sup>, and color white.

IT 225789-38-8, Aluminum diethylphosphinate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (fireproofing agent-stabilizer combination for thermoplastics)  
 RN 225789-38-8 CAPLUS  
 CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L58 ANSWER 9 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:612144 CAPLUS

DOCUMENT NUMBER: 141:141569

TITLE: Fire-resistant resin compositions, their manufacture, and their moldings with suppressed mold deposition and bleed out of fireproofing agents

INVENTOR(S): Harashina, Hatsuhiko

PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 54 pp.

CODEN: JKXXAF

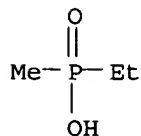
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

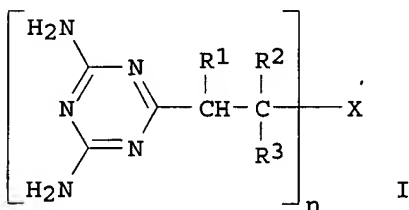
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004210882	A2	20040729	JP 2002-379984	20021227
PRIORITY APPLN. INFO.:			JP 2002-379984	20021227
ED Entered STN: 30 Jul 2004				
AB The compns., useful for electronic parts, OA equipment, elec. appliances, automobile parts, and machinery parts, contain base polymers, cyano-containing heterocyclic compds., and P compds., aromatic polymers, N compds., inorg. metal compds., S compds., and/or Si compds. Thus, a test piece containing Duranex (PBT) 100, tris(2-cyanoethyl) isocyanurate 10, and Novaexcel 140 (red P) 8 parts showed fire resistance (UL 94) V-0 and no blooming.				
IT 176316-86-2, Aluminum ethylmethylphosphinate				
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)				
(fireproofing aid; fire-resistant resin compns. containing cyano-containing heterocyclic compds. for moldings with suppressed mold deposition and bleed out of fireproofing agents)				
RN 176316-86-2 CAPLUS				
CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)				



● 1/3 Al

L58 ANSWER 10 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:605702 CAPLUS  
 DOCUMENT NUMBER: 141:157927  
 TITLE: Guanamine compounds, their manufacture, and  
 fire-resistant polymer compositions and moldings with  
 good bleed-out resistance  
 INVENTOR(S): Harashina, Hatsuhiko  
 PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 35 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004210640	A2	20040729	JP 2002-378455	20021226
PRIORITY APPLN. INFO.:			JP 2002-378455	20021226
OTHER SOURCE(S):			MARPAT 141:157927	
ED Entered STN: 29 Jul 2004				
GI				



AB Title guanamine compds. I (R<sup>1</sup>-R<sup>3</sup> = H, alkyl; X = residue of OH compds. or thiols, O, S; n = 1-6) are manufactured by reaction of (YR<sup>1</sup>CHCR<sup>2</sup>R<sup>3</sup>)<sub>n</sub>X (R<sup>1</sup>-R<sup>3</sup>, X, n = same as in I; Y = nitrile, X<sub>1</sub>CO; X<sub>1</sub> = OH, Cl, alkoxy, aryloxy) and dicyandiamide or biguanides in the presence or absence of basic catalysts. Salts of I are manufactured by reaction of I and N-containing cyclic compds.

having

OH groups. Thus, Duracon M 90-44 (polyacetal copolymer), bis[β-(2,4-diamino-s-triazin-6-yl)ethyl] ether, Irganox 245 [triethylene glycol bis[3-(3-tert-butyl-5-methyl-4-hydroxyphenyl)] propionate], and Ca 12-hydroxystearate were kneaded and press molded to give a test piece showing fire retardance V-1 (UL 94).

IT 176316-86-2, Aluminum ethylmethylphosphinate

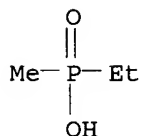
RL: MOA (Modifier or additive use); TEM (Technical or engineered material

use); USES (Uses)

(fireproofing agents; manufacture of guanamine compds. as fireproofing agents for polymer compns. with good bleed-out resistance)

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L58 ANSWER 11 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:588370 CAPLUS

DOCUMENT NUMBER: 141:141239

TITLE: Non-halo highly fire-resistant resin composition

INVENTOR(S): Harashina, Hatsuhiko

PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 38 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004204194	A2	20040722	JP 2002-378185	20021226
PRIORITY APPLN. INFO.:			JP 2002-378185	20021226

ED Entered STN: 23 Jul 2004

AB The composition comprises base resins and fireproofing agents selected from phosphoric or phosphonic acid metal salts, P compds., N compds., inorg. metal compds., Si compds., and S compds. A composition comprised PBT (Duranex) 100, phosphonic acid aluminum salt 10, Nova Excel 140 8, and Irganox 1010 0.3 part, giving test pieces with UL 94 burning rating V-0.

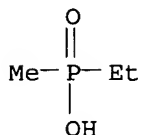
IT 176316-86-2

RL: MOA (Modifier or additive use); USES (Uses)

(fireproofing agents; non-halo highly fire-resistant resin composition)

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L58 ANSWER 12 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:588250 CAPLUS

DOCUMENT NUMBER: 141:124567

TITLE: Guanamine compounds, their manufacture, fire-resistant resin compositions containing them, and molded products thereof

INVENTOR(S): Harashina, Hatsuhiko

PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 37 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004203846	A2	20040722	JP 2002-378186	20021226
PRIORITY APPLN. INFO.:			JP 2002-378186	20021226

OTHER SOURCE(S): MARPAT 141:124567

ED Entered STN: 23 Jul 2004

AB Guanamine compds. Q1(CR1R2)nQ2 ( $n \geq 1$ ; R1, R2 = H, alkyl; Q1 = 2,4-diamino-1,3,5-triazin-6-yl; Q2 = 3-R3-5-R4-2,4,6-trioxohexahydro-1,3,5-triazin-1-yl; R3, R4 = H, alkyl, cyanoalkyl, carboxyalkyl, alkoxyalkyl, aryloxyalkyl, haloformylalkyl, guanamylalkyl) or their salts, useful for antibleeding fireproofing agents, are manufactured by reaction of NC(CR1R2)nQ2 ( $n \geq 1$ ; R1, R2 = H, alkyl; R3, R4 = H, alkyl, cyanoalkyl, guanamylalkyl) with dicyandiamide or biguanide or reaction of X1CO(CR1R2)nQ2 [ $n \geq 1$ ; X1 = OH, halo, alkoxy, aryloxy; R1, R2 = H, alkyl; R3, R4 = H, alkyl, (CR1R2)nCOX1] with biguanide. Thus, 30 parts tris( $\beta$ -cyanoethyl) isocyanurate was treated with 27.6 parts dicyandiamide in ethylene glycol monomethyl ether in the presence of KOH to give tris[ $\beta$ -(2,4-diamino-5-triazin-6-yl)ethyl] isocyanurate, 80 parts of which was blended with polyacetal copolymer (Duracon M 90-44) 100, Irganox 245 0.5, and Ca 12-hydroxystearate 0.5 part and press molded to give a test piece showing UL-94 fire resistance rating V-1.

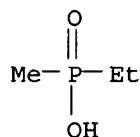
IT 176316-86-2; Aluminum ethylmethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)

(manufacture of guanidine compds. for fireproofing agents for resin compns. with good bleeding resistance)

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L58 ANSWER 13 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:310135 CAPLUS

DOCUMENT NUMBER: 140:322575

TITLE: Halogen-free acrylic polymer adhesive compositions with good fire resistance, their adhesive films, and polyimide films having adhesive layers

INVENTOR(S): Ito, Toshihiko; Tanaka, Masaru

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004115612	A2	20040415	JP 2002-278950	20020925
PRIORITY APPLN. INFO.:			JP 2002-278950	20020925

OTHER SOURCE(S): MARPAT 140:322575

ED Entered STN: 16 Apr 2004

AB The compns., useful for printed circuit boards, contain (A) copolymers (Mw  $\geq 500,000$ , Tg  $\leq -5^\circ$ ) containing acrylonitrile 15-35, glycidyl (meth)acrylate 0.5-4, and  $\geq 1$  (meth)acrylic acid or its derivs. 61-84.5%, (B) epoxy resins, (C) curing agents for the epoxy resins, and (D) Al-containing organophosphorus compds. Alternatively, the compns. contain copolymers containing acrylonitrile, glycidyl (meth)acrylate, and  $\geq 1$  (meth)acrylic acid or its derivs., B, C, and D, and have temperature of  $\geq 300^\circ$  where no apparent change is observed after soaking in solder for 3 min (further measurement condition given). Thus, an adhesive film comprising Kapton (polyimide film) and an adhesive layer comprising 15:2:30:53 acrylonitrile-glycidyl methacrylate-Bu acrylate-Et acrylate copolymer 533, Epikote 828 15, Plyophen F 2822 (phenolic resin) 4.8, Exolit OP 940 (Al-containing organophosphorus compound) 65, Curezol 2PZ-CN (1-cyanoethylphenylimidazole) 0.2 part was laminated with a Cu foil at  $120^\circ$  to give a test piece showing  $180^\circ$  peeling strength 1.2 kN/m, aforementioned temperature  $330^\circ$ , and fire resistance (UL 94) V-0.

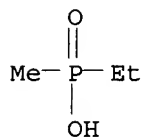
IT 176316-86-2, Exolit OP 940

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(fireproofing agents; halogen-free acrylic polymer adhesive compns. with good fire and solder heat resistance for polyimide adhesive films for printed circuit boards)

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

L58 ANSWER 14 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:261027 CAPLUS

DOCUMENT NUMBER: 140:288232

TITLE: Flame retardant thermosetting plastic compositions



INVENTOR(S): Knop, Susanne; Sicken, Martin; Hoerold, Sebastian  
PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany  
SOURCE: Eur. Pat. Appl., 15 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1403311	A1	20040331	EP 2003-20514	20030916
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10244576	A1	20040408	DE 2002-10244576	20020925
JP 2004115797	A2	20040415	JP 2003-329719	20030922
PRIORITY APPLN. INFO.:			DE 2002-10244576	A 20020925

OTHER SOURCE(S): MARPAT 140:288232

ED Entered STN: 31 Mar 2004

AB Flame retardant compns., containing salt of phosphinic (or diphosphinic) acid (or polymeric derivs. of these salts) and inorg. compds. and/or minerals additives are useful for thermosetting (unsatd. polyester resins and epoxy resins) molded parts and coatings. A composition, containing 10 weight parts of

aluminum diethylphosphinate and 10 weight parts of zinc borate increases fire-resistance of molded epoxy resins (Beckopox EP 140).

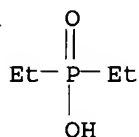
IT 225789-38-8, Aluminum Diethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)

(flame retardant compns. for unsatd. polyester and epoxy resins, containing salts of phosphinic acid and inorg. compds. and/or minerals additives for molded parts and coatings)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 15 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:261026 CAPLUS

DOCUMENT NUMBER: 140:288231

TITLE: Flame retardant thermosetting plastic compositions

INVENTOR(S): Knop, Susanne; Sicken, Martin; Hoerold, Sebastian

PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

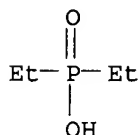
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1403310	A1	20040331	EP 2003-20513	20030916
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10244578	A1	20040408	DE 2002-10244578	20020925
JP 2004115796	A2	20040415	JP 2003-329718	20030922
US 2004110878	A1	20040610	US 2003-669483	20030924
PRIORITY APPLN. INFO.:			DE 2002-10244578	A 20020925
OTHER SOURCE(S): MARPAT 140:288231				
ED Entered STN: 31 Mar 2004				
AB Flame retardant compns., containing salt of phosphinic (or diphosphinic) acid (or polymeric derivs. of these salts) and organic or/and inorg. P-containing additives as synergists are useful for thermosetting (unsatd. polyester resins and epoxy resins) molded parts, laminated plastics and coatings. A composition, containing 5 weight parts of aluminum diethylphosphinate and 5 weight parts of triethylphosphate increases fire-resistance of molded epoxy resins (Beckopox EP 140).				
IT 225789-38-8, Aluminum Diethylphosphinate				
RL: MOA (Modifier or additive use); USES (Uses) (flame retardant compns. for unsatd. polyester and epoxy resins, containing salt of phosphinic acid and organic or/and inorg. P-containing additives as synergists for molded parts, laminated plastics and coatings)				
RN 225789-38-8 CAPLUS				
CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)				



● 1/3 A1

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

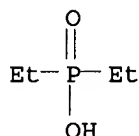
L58 ANSWER 16 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:261025 CAPLUS  
 DOCUMENT NUMBER: 140:288230  
 TITLE: Flame retardant thermosetting plastic compositions  
 INVENTOR(S): Knop, Susanne; Sicken, Martin; Hoerold, Sebastian  
 PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany  
 SOURCE: Eur. Pat. Appl., 14 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1403309	A1	20040331	EP 2003-20512	20030916

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

DE 10244579	A1	20040408	DE 2002-10244579	20020925
JP 2004115795	A2	20040415	JP 2003-329717	20030922
US 2005049339	A1	20050303	US 2003-669973	20030924

PRIORITY APPLN. INFO.: DE 2002-10244579 A 20020925  
 OTHER SOURCE(S): MARPAT 140:288230  
 ED Entered STN: 31 Mar 2004  
 AB Flame retardant compns., containing salt of phosphinic (or diphosphinic) acid (or polymeric derivs. of these salts) and organic or/and inorg. P- and N-containing additives as synergists are useful for thermosetting (unsatd. polyester resins and epoxy resins) molded parts and coatings. A composition, containing 5 weight parts of aluminum diethylphosphinate (DEPAL), 5 weight parts of triethylphosphate and 5 weight parts of melamine increases fire-resistance of molded epoxy resins (Beckopox EP 140).  
 IT 225789-38-8, Aluminum Diethylphosphinate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (flame retardant compns. for unsatd. polyester and epoxy resins, containing salt of phosphinic acid and organic or/and inorg. P- and N-containing additives as synergists for molded parts and coatings.)  
 RN 225789-38-8 CAPLUS  
 CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



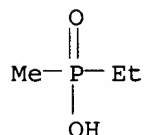
● 1/3 A1

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 17 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:202082 CAPLUS  
 DOCUMENT NUMBER: 140:236560  
 TITLE: Surface modified phosphinic acid salts  
 INVENTOR(S): Hoerold, Sebastian; Heinrichs, Franz-Leo; Jung, Elisabeth  
 PATENT ASSIGNEE(S): Clariant GmbH, Germany  
 SOURCE: Eur. Pat. Appl., 16 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

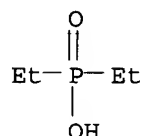
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1396524	A1	20040310	EP 2003-18723	20030826
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10241373	A1	20040318	DE 2002-10241373	20020906
US 2004049063	A1	20040311	US 2003-655886	20030905

JP 2004099614 A2 20040402 JP 2003-314470 20030905  
PRIORITY APPLN. INFO.: DE 2002-10241373 A 20020906  
OTHER SOURCE(S): MARPAT 140:236560  
ED Entered STN: 12 Mar 2004  
AB The processability of phosphinic acid salt fireproofing agents in thermoplastic polymers is improved by coating the salts with synthetic polymers or waxes.  
IT 176316-86-2, Aluminum ethylmethylphosphinate 225789-38-8  
, Aluminum diethylphosphinate  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(phosphinic acid salt fireproofing agents surface modified by polymers or waxes for improved processability in thermoplastic polymers)  
RN 176316-86-2 CAPLUS  
CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



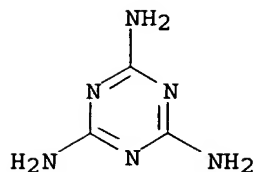
● 1/3 A1

RN 225789-38-8 CAPLUS  
CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

IT 9003-08-1, Madurit MW909  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(surface treatment; phosphinic acid salt fireproofing agents surface modified by polymers or waxes for improved processability in thermoplastic polymers)  
RN 9003-08-1 CAPLUS  
CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA INDEX NAME)  
  
CM 1  
  
CRN 108-78-1  
CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O

H<sub>2</sub>C=O

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 18 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:200115 CAPLUS

DOCUMENT NUMBER: 140:236547

TITLE: Compacted flame retardant composition

INVENTOR(S): Bauer, Harald; Hoerold, Sebastian; Krause, Werner; Sicken, Martin

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

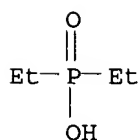
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1396523	A1	20040310	EP 2003-18726	20030826
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10241376	A1	20040318	DE 2002-10241376	20020906
JP 2004099894	A2	20040402	JP 2003-314473	20030905
PRIORITY APPLN. INFO.:			DE 2002-10241376	A 20020906
OTHER SOURCE(S):	MARPAT 140:236547			
ED	Entered STN: 12 Mar 2004			
AB	Powdered fire retardant compns. based on ≥1 of P-containing compds., minerals, and N-containing compds. for plastics exhibit decreased dusting when compacted optionally in the presence of a compacting aid such as waxes.			
IT	225789-38-8, Aluminum diethylphosphinate			
	RL: MOA (Modifier or additive use); USES (Uses) (compacted powdered fire retardant compns. based on phosphorus-containing compds., minerals or nitrogen-containing compds. and optionally compacting aids with decreased dusting for plastics)			
RN	225789-38-8 CAPLUS			
CN	Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)			



● 1/3 A1

IT 9003-08-1, Melamine resin

RL: POF (Polymer in formulation); USES (Uses)

(substrate; compacted powdered fire retardant compns. based  
phosphorus-containing compds., minerals or nitrogen-containing compds. and  
optionally compacting aids with decreased dusting for plastics)

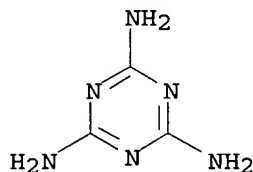
RN 9003-08-1 CAPLUS

CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O

 $\text{H}_2\text{C}=\text{O}$ 

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 19 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:200114 CAPLUS

DOCUMENT NUMBER: 140:236546

TITLE: Granular fire retardant composition

INVENTOR(S): Bauer, Harald; Hoerold, Sebastian; Krause, Werner;  
Sicken, Martin

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Eur. Pat. Appl., 15 pp.

CODEN: EPXXDW

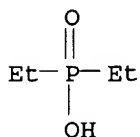
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1396522	A1	20040310	EP 2003-18725	20030826
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10241375	A1	20040318	DE 2002-10241375	20020906
JP 2004099893	A2	20040402	JP 2003-314472	20030905
PRIORITY APPLN. INFO.:			DE 2002-10241375	A 20020906
OTHER SOURCE(S):		MARPAT 140:236546		
ED	Entered STN: 12 Mar 2004			
AB	Fire retardant compns. based on a binder and $\geq 1$ of P-containing compds., minerals, and N-containing compds. exhibit improved dispersion in the granular form in plastics.			
IT	225789-38-8, Aluminum diethylphosphinate			
	RL: MOA (Modifier or additive use); USES (Uses) (granular fire retardant compns. based on binders and phosphorus-containing compds., minerals or nitrogen-containing compds.)			
RN	225789-38-8 CAPLUS			
CN	Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)			



● 1/3 A1

IT 9003-08-1, Melamine resin  
 RL: POF (Polymer in formulation); USES (Uses)  
 (substrate; granular fire retardant compns. based on binders and phosphorus-containing compds., minerals or nitrogen-containing compds.)

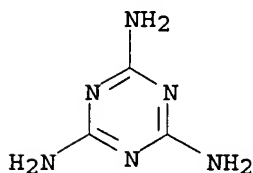
RN 9003-08-1 CAPLUS

CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O

 $\text{H}_2\text{C}=\text{O}$ 

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 20 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:138727 CAPLUS

DOCUMENT NUMBER: 140:182434

TITLE: Dust free, powdered flame retardant composition, procedure for their production and their use, as well as flame retardant polymer molding materials

INVENTOR(S): Bauer, Harald; Hoerold, Sebastian; Krause, Werner; Sicken, Martin

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Ger., 14 pp.

CODEN: GWXXAW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10241374	B3	20040219	DE 2002-10241374	20020906
EP 1396521	A1	20040310	EP 2003-18724	20030826
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004099892	A2	20040402	JP 2003-314471	20030905
US 2005032958	A1	20050210	US 2003-656313	20030905
PRIORITY APPLN. INFO.:			DE 2002-10241374	A 20020906

OTHER SOURCE(S): MARPAT 140:182434

ED Entered STN: 20 Feb 2004

AB A dust free, powdered flame retardant composition, containing salts of P-containing acids

or/and their polymers optionally with synthetic or mineral inorg. compds. and, optionally, N-containing heterocycles, as fireproofing agents and alkyl alkoxylates, natural, modified or synthetic waxes, paraffin and mineral (optionally chlorinated) oil, modified and substituted siloxanes, castor oil, glycerol, di-2-ethylhexyl phthalate, phthalic acid polyester, aromatic and aliphatic esters of phosphoric acid, anionic polyester-polyurethane, polyglycoles as dust reduction additives (optionally added as aqueous suspensions)

is useful for molded plastics, films, threads and fibers. A composition, containing reaction product of melamine polyphosphate (Melapur MP), with aluminum diethylphosphinate and alcoxylated alc. (Genapol 2882) increases fire-resistance of polybutylene terephthalate.

IT 225789-38-8P, Aluminum diethylphosphinate

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

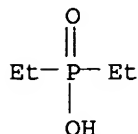
(flame retardant composition for molded plastics, containing salts of phosphinic

or diphosphinic acids or/and their polymers in mixture with inorg. compds. and, optionally, N-containing heterocycles and dust reduction additives)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)





● 1/3 A1

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 21 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:985779 CAPLUS

DOCUMENT NUMBER: 140:28389

TITLE: Mixtures of phosphonites and other components for compounding of plastics

INVENTOR(S): Schlosser, Elke; Wanzke, Wolfgang; Lechner, Christian

PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 23 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1371656	A1	20031217	EP 2003-12866	20030606
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10226732	A1	20040108	DE 2002-10226732	20020614
US 2004051088	A1	20040318	US 2003-459976	20030612
JP 2004018857	A2	20040122	JP 2003-169378	20030613
PRIORITY APPLN. INFO.:			DE 2002-10226732	A 20020614

OTHER SOURCE(S): MARPAT 140:28389

ED Entered STN: 18 Dec 2003

AB The title compns., useful as stabilizers and fireproofing agents for plastics, especially polyamides and polyesters, contain phosphonites and/or esters and/or salts of fatty acids and/or carboxylic esters and/or amides. A mixture of glass fiber-reinforced (30%) nylon 66 (Durethan AKV 30) and Al ethylmethylphosphinate 10, melamine polyphosphate (Melapur 2000) 5, montan wax acid ethylene glycol esters (Licowax E) 0.5, and N,N'-bis(2,2,6,6-tetramethyl-4-piperidyl)-1,3-benzenedicarboxamide (Nylostab S-EED) 0.5%, extruded at 290°, had UL 94 flammability rating (0.8 mm) V-0, melt viscosity 54 mL/10 min, and color change (delta E, DIN 6174) 27.

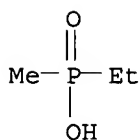
IT 176316-86-2, Aluminum ethylmethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)

(fireproofing agent; mixts. of phosphonites and other components for compounding of plastics)

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)

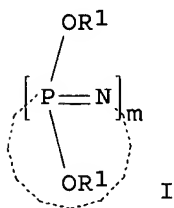


● 1/3 A1

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 22 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:943428 CAPLUS  
 DOCUMENT NUMBER: 140:17333  
 TITLE: Halogen-free fire-resistant resin compositions, their manufacture, and their moldings  
 INVENTOR(S): Harashina, Hatsuhiko; Yamada, Shinya  
 PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 41 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003342482	A2	20031203	JP 2003-75748	20030319
PRIORITY APPLN. INFO.: OTHER SOURCE(S): MARPAT 140:17333			JP 2002-76241	A 20020319
ED Entered STN: 04 Dec 2003				
GI				



AB The compns. for elec. parts, office automation apparatus, household elec. appliances, machinery parts, etc., are manufactured by mixing (A) base resins, (B) cyclic phosphazene compds. I ( $m = 3-25$ ;  $R_1 = \text{aryl, alkylaryl}$ ; 0.1-100 mol% of  $R_1$  is alkylaryl), linear phosphazene compds.  $X[P(OR_1)_2N]_nY$  [ $n = 3-10,000$ ;  $X = N:P(OR_1)_3$ ,  $N:P(O)OR_1$ ;  $Y = P(OR_1)_4$ ,  $P(O)(OR_1)_2$ ;  $R_1 = \text{same as above}$ ], and/or crosslinked compds. of the cyclic compds. and/or the linear compds., and (C) fireproofing aids of aromatic resins, N compds., inorg. metal compds., S compds., Si compds., and/or P compds. Alternatively, the compns. comprise (a) poly(alkylene arylates) 100, (b) cyclic or linear tolyloxyphosphazenes, cyclic or linear phenoxytolylloxyphosphazenes, and/or their crosslinked compds. 1-80, and (c) fireproofing aids of (1)

carbonizable aromatic resins, (2) amino-containing cyclic N compds., their salts

with oxo acids or organophosphoric acids, polyphosphoric acid amides, urea compds., and/or tetrazoles, (3) polyvalent metal salts of H<sub>3</sub>PO<sub>4</sub>, H<sub>3</sub>BO<sub>3</sub>, and/or stannic acid, (4) organosulfonic acid metal salts, (5) (branched) organosiloxanes, and/or (6) (in)organic P compds. 0.1-500 parts. Thus, a composition containing Duranex [poly(butylene terephthalate)] 100, phenoxytolyloxyphosphazene cyclic trimer and tetramer 15, PMP 200 (melamine melam melem polyphosphate salt) 75, an antioxidant 0.5, and a filler 50 parts was injection-molded to give a test piece showing UL-94 fire resistance V-0.

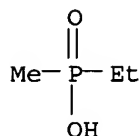
IT 176316-86-2, Aluminum ethylmethylphosphinate

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(fireproofing aid; halogen-free fire-resistant resin compns. containing phosphazenes and fireproofing aids for moldings)

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L58 ANSWER 23 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:837191 CAPLUS

DOCUMENT NUMBER: 139:324235

TITLE: Thermosetting resin composition with good electrical properties, adhesion, and flame, water, and heat resistance, for prepreg and laminated sheet

INVENTOR(S): Tsuchikawa, Shinji; Arata, Michitoshi; Tomioka, Kenichi; Kobayashi, Kazuhito

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003087230	A1	20031023	WO 2003-JP4799	20030416
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,				

BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
PRIORITY APPLN. INFO.: JP 2002-113017 A 20020416

ED Entered STN: 24 Oct 2003

AB Title composition comprises a metal salt of a disubstituted phosphinic acid and a resin with dielec. constant at  $\geq 1$  GHz  $\leq 2.9$ . Thus, a glass cloth was impregnated with a composition comprising ethylmethylphosphinic acid aluminum salt 62.4, SMA 3000 styrene-maleic anhydride copolymer 50.0, cyanato ester resin obtained from 2,2-di(cyanatophenyl)propane and p-cumylphenol 100.0, biphenyl type epoxy resin 47.2, triethylamine 0.1, zinc naphthenate 0.1, p-cumylphenol 10.7 parts and dried at 160° for 10 min to give a prepreg, 4 of which were heat-pressed between two copper foils at 185° for 90 min under 25 kg/cm<sup>2</sup> to give a copper laminate film with dielec. constant 3.5, dielec. loss tangent 0.007, flame retardancy V-0, moisture absorption 0.5%, peel strength 1.2 kN/m, glass transition temperature 180°, and good solder heat resistance.

IT 176316-86-2, Ethylmethylphosphinic acid, aluminum salt (3:1)

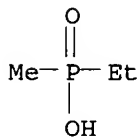
225789-38-8, Diethylphosphinic acid, aluminum salt (3:1)

RL: MOA (Modifier or additive use); USES (Uses)

(flame retardant; thermosetting resin composition with good elec. properties, adhesion, and flame, water, and heat resistance, for prepreg and laminated sheet)

RN 176316-86-2 CAPLUS

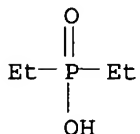
CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 24 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:823379 CAPLUS

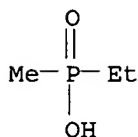
DOCUMENT NUMBER: 139:308676

TITLE: Fire-resistant radiation-curable polymer compositions and their use for multilayer printed circuit board fabrication

INVENTOR(S): Imaizumi, Masahiro; Asano, Toyofumi  
 PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003301013	A2	20031021	JP 2002-107437	20020410
PRIORITY APPLN. INFO.:			JP 2002-107437	20020410

OTHER SOURCE(S): MARPAT 139:308676  
 ED Entered STN: 21 Oct 2003  
 AB The compns., useful for interlayer dielects. and solder resists, contain reactive monomers bearing  $\geq 1$  (meth)acryloyl groups and halogen-free fireproofing agents selected from (R2R2P:OO)-m.Mm+ and [(O)R1P:OR3P:OR2(O)]2-n.Mxm+. (R1,2 = linear or branched C1-6 alkyl or aryl; R3 = linear or branched C1-10 alkylene, C6-10 arylene, alkylarylene, or arylalkylene; M = Mg, Ca, Al, Sb, Sn, Ge, Ti, Zn, Fe, Zr, Ce, Bi, Sr, Mn, Li, Na, K; m,n,x = 1-4). Thus, a composition containing 100 parts Kayarad R 115 (bisphenol A epoxy acrylate) and 50 parts OP 930 (Al salt of ethylmethylphosphinic acid) was applied to a PET film, UV-irradiated, and released from the film to give a test piece showing fire resistance (UL 94) V-0 and glass-transition temperature 120°.  
 IT 176316-86-2, Aluminum ethylmethylphosphinate  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (fireproofing agent; halogen-free fire-resistant radiation-curable polymer compns. containing phosphinates for multilayer printed circuit board fabrication)  
 RN 176316-86-2 CAPLUS  
 CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

L58 ANSWER 25 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:628029 CAPLUS  
 DOCUMENT NUMBER: 139:181087  
 TITLE: Halogen-free fire-resistant polymer compositions, their manufacture, and their moldings  
 INVENTOR(S): Harashina, Hatsuhiko  
 PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 38 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003226818	A2	20030815	JP 2002-348568	20021129
PRIORITY APPLN. INFO.:			JP 2001-368007	A 20011130

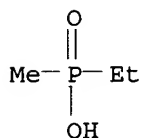
ED Entered STN: 15 Aug 2003

AB The compns. comprise (A) base polymers, (B)  $\geq 1$  fireproofing agent chosen from (a) composite salts of amino-containing N compds. and polyphosphoric acid, (b) salts of amino-containing N compds. and polymetaphosphoric acid, (c) polyphosphoric acid amides, (d) salts of amino-containing N compds. with sulfuric acid, pyrosulfuric acid, organic sulfonic acids, organic phosphonic acids, or organic phosphinic acids, and (e) cyclic urea compds., and (C)  $\geq 1$  fireproofing aid chosen from (f) P compds., (g) aromatic polymers, and (h) inorg. acid metal salts. Thus, a composition containing Duranex (polybutylene terephthalate) 100, Apinon 901 (melamine sulfate) 30, PX 200 [resorcinol bis(di-2,6-xylylphosphate)] 20, Irganox 1010 [pentaerythritol tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate]] 0.5, calcium carbonate 2, bisphenol A diglycidyl ether 2, PTFE 1, and glass chopped strand 30 parts was injection-molded to give a test piece showing UL-94 rating V-0 and good moldability.

IT 176316-86-2, Aluminum ethylmethylphosphinate  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (fireproofing aid; halogen-free fire-resistant polymer compns.)

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L58 ANSWER 26 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:434668 CAPLUS

DOCUMENT NUMBER: 139:22865

TITLE: Flame-retardant resin composition and molded products therefrom

INVENTOR(S): Harashina, Hatsuhiko

PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan

SOURCE: PCT Int. Appl., 114 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003046084	A1	20030605	WO 2002-JP12405	20021128

W: CN, JP, US  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT,  
 LU, MC, NL, PT, SE, SK, TR  
 EP 1466946 A1 20041013 EP 2002-785951 20021128  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, FI, CY, TR, BG, CZ, EE, SK  
 US 2004254270 A1 20041216 US 2004-493538 20040422  
 PRIORITY APPLN. INFO.: JP 2001-368005 A 20011130  
 WO 2002-JP12405 W 20021128

ED Entered STN: 06 Jun 2003

AB A flame-retardant resin composition comprises a thermoplastic resin; a flame retardant comprising a phosphorus compound, an aromatic resin, and at least one flame retardant aid selected among nitrogen compds. and metal salts of inorg. acids; and  $\geq 1$  stabilization aid selected among compds. having a functional group reactive with an active hydrogen atom and water-repellent compds. The phosphorus compound may be a phosphoric ester. The aromatic resin may be a polyphenylene sulfide resin or polyphenylene oxide resin. The nitrogen compds. may be salts of an aminated triazine compound with an oxoacid, salts of an aminated triazine compound with a hydroxylated triazine compound, polyphosphoramides, cyclic urea compds., etc. The flame-retardant resin composition has been flameproofed without using any halogenated flame retardant. A composition contained PBT (Duranex) 100, resorcinol bis(di-2,6-xylenyl phosphate) (PX200) 40, Poly(1,4-phenylene oxide) (YPX 100F) 35, PMP 200 15, Epikote 828 2, glass chopped strand 80, Irganox 1010 0.8, Adekastab PEP36 0.8, and 1.3 PTFE part, giving test pieces with UL94 burning rating V-0, no dripping, good blooming resistance and tensile strength retention in water 78%.

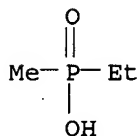
IT 176316-86-2, Aluminum ethylmethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)

(flame retardant; halo-free flame-retardant resin composition and molded products therefrom)

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 27 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:747882 CAPLUS

DOCUMENT NUMBER: 137:263812

TITLE: Fire-resistant epoxy resin compositions containing (di)phosphinic acid salt-based fire retardants and there use

INVENTOR(S): Imaizumi, Masahiro; Asano, Toyofumi; Shinmoto, Akishige

PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002284963	A2	20021003	JP 2001-88322	20010326
PRIORITY APPLN. INFO.:			JP 2001-88322	20010326

OTHER SOURCE(S): MARPAT 137:263812

ED Entered STN: 03 Oct 2002

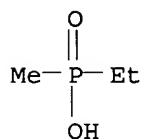
AB Title compns. comprise (A) epoxy resins, (B) curing agents, and (C) fire retardants of (di)phosphinic acid salts and/or their polymers. Thus, a varnish comprising EOCN 104S 100, H 1 phenol novolak 48, Exolit OP 940 aluminum ethylmethylphosphinate 30, and 2-phenyl-4-methyl-5-hydroxymethylimidazole 0.5 parts was impregnated in a glass fabric, three of which were heat pressed to give a laminate showing good fire resistance.

IT 176316-86-2, Exolit OP 940

RL: MOA (Modifier or additive use); USES (Uses)  
 (fire retardant; fire-resistant epoxy resin compns. containing (di)phosphinic acid salt-based fire retardants)

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L58 ANSWER 28 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:534868 CAPLUS

DOCUMENT NUMBER: 133:151409

TITLE: Flame retardant thermosetting plastic compositions

INVENTOR(S): Horold, Sebastian

PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

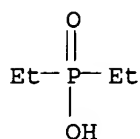
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1024168	A1	20000802	EP 1999-125891	19991224
EP 1024168	B1	20030423		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19903707	A1	20000824	DE 1999-19903707	19990130
DE 19903707	C2	20030528		
AT 238385	E	20030515	AT 1999-125891	19991224



ES 2195503 T3 20031201 ES 1999-125891 19991224  
 US 6420459 B1 20020716 US 2000-491321 20000125  
 JP 2000219775 A2 20000808 JP 2000-20188 20000128  
 PRIORITY APPLN. INFO.: DE 1999-19903707 A 19990130  
 OTHER SOURCE(S): MARPAT 133:151409  
 ED Entered STN: 04 Aug 2000  
 AB Synergistic mixts. of (A) [R1R2P(:)O]m- Mm+ and(or) [OPR1(:)R3P(:)R2O]n2-  
 Mxm+ (R1, R2 = C1-6 alkyl or aryl; R3 = C1-10 alkylene, C6-10 arylene,  
 C≤10 alkylarylene, C≤10 arylalkylene; M = Mg, Ca, Al, Sb,  
 Sn, Ge, Ti, Zn, Fe, Zr, Ce, Bi, Sr, Mn, Li, Na, and(or) K; m, n, x = 1-4)  
 and (B) metal hydroxides, N compds., or P-N compds. are useful as flame  
 retardants for thermosetting polymers.  
 IT 225789-38-8  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (flame retardant thermosetting plastic compns. containing metal  
 (di)phosphinates and metal hydroxides, nitrogen compds., or  
 phosphorus-nitrogen compds.)  
 RN 225789-38-8 CAPLUS  
 CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L58 ANSWER 29 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:8062 CAPLUS  
 DOCUMENT NUMBER: 130:53152  
 TITLE: Fire-resistant thermoplastic polyester compositions  
 containing nitrogenous organic compounds and  
 phosphinic acid salts  
 INVENTOR(S): Hanabusa, Kazuhito; Matsushima, Mitsunori  
 PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9856857	A1	19981217	WO 1998-JP2625	19980615
W: CN, KR, SG, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 11060924	A2	19990305	JP 1998-166462	19980615
EP 919591	A1	19990602	EP 1998-924622	19980615
EP 919591	B1	20031001		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AT 251202	E	20031015	AT 1998-924622	19980615

US 6433045 B1 20020813 US 1998-214497 19981230  
 PRIORITY APPLN. INFO.: JP 1997-156533 A 19970613  
 WO 1998-JP2625 W 19980615

OTHER SOURCE(S): MARPAT 130:53152

ED Entered STN: 06 Jan 1999

AB The composition, useful elec. and electronic parts, comprises (A) 100 parts thermoplastic polyester resin, (B) 5-40 parts phosphinic acid salt [R1(R2)P(O)O]mM and/or diphosphinic acid salt or its polymer -[O(O)P(R1)R3P(R2)(O)O]nMx (R1, R2 = C1-6 alkyl, phenyl; R3 = C1-10 alkylene, arylene, alkylarylene, arylalkylene; M = Ca, Al ions; M = 2, 3; n = 1, 3; and x = 1, 2), and (C) 1-35 parts nitrogenous organic compds. The polyester compns. have good flame retardancy even without containing a halogenated flame retardant, mech. properties, moldability, and thermal stability in residence. Thus, 100 parts poly(butylene terephthalate) was mixed with ethane-1,2-bis(Me phosphinic acid) calcium salt 12 and MC 610 (Melamine cyanurate) 5 parts and molded to give a test piece showing UL 94 flammability rating V-0, tensile strength 48 MPa initially and 47 MPa after and thermal residence at 260° for 30 min.

IT 9003-08-1, Formaldehyde-melamine copolymer 176316-86-2,

Aluminum ethylmethylphosphinate 195516-35-9

RL: MOA (Modifier or additive use); USES (Uses)

(fireproofing agent; fire-resistant thermoplastic polyester compns. containing nitrogenous organic compds. and phosphinic acid salts)

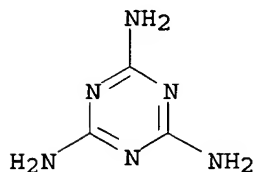
RN 9003-08-1 CAPLUS

CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

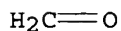
CMF C3 H6 N6



CM 2

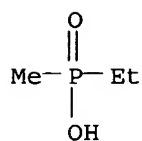
CRN 50-00-0

CMF C H2 O



RN 176316-86-2 CAPLUS

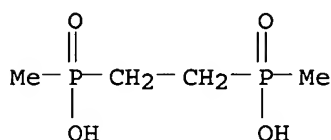
CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

RN 195516-35-9 CAPLUS

CN Phosphinic acid, 1,2-ethanediylbis[methyl-, calcium salt (1:1) (9CI) (CA INDEX NAME)



● Ca

REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 30 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:573426 CAPLUS

DOCUMENT NUMBER: 113:173426

TITLE: Preparation of aqueous additive emulsions for polymers

INVENTOR(S): Hyche, Kenneth Wayne; Gose, William Christopher

PATENT ASSIGNEE(S): Eastman Kodak Co., USA

SOURCE: PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9002770	A2	19900322	WO 1989-US3711	19890830
WO 9002770	A3	19900503		
W: JP, KR				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
US 5007961	A	19910416	US 1988-240903	19880906
CA 1335136	A1	19950404	CA 1989-609669	19890829
EP 438425	A1	19910731	EP 1989-910718	19890830
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
JP 04500534	T2	19920130	JP 1989-510085	19890830
US 5190579	A	19930302	US 1990-476071	19900207
US 5334644	A	19940802	US 1993-31371	19930302
US 5443910	A	19950822	US 1994-286831	19940802
PRIORITY APPLN. INFO.:			US 1988-240903	A 19880906
			US 1985-701888	B2 19850215

US 1986-827042	A2 19860207
US 1988-197946	A2 19880524
WO 1989-US3711	W 19890830
US 1990-476071	A3 19900207
US 1993-31371	A3 19930302

ED Entered STN: 09 Nov 1990

AB The title aqueous systems, which do not form color complexes in situ, comprise an emulsified wax, surfactant 0.025-60, base (pH 7-12) 0.0005-2, additive 0.05-160 parts (wax basis), and water. A mixture of octadecyl 3-(3'-5'-di-tert-butyl-4-hydroxyphenyl)propionate 32.3, oxidized polyethylene wax 10.8, KOH 0.5, Tergitol 15-S-15 6.4 parts, and water to 70% solids was heated under stirring to melt the solids, then mixed with hot H2O to give an emulsion. Polypropylene pellets were coated with the emulsion to 0.3-0.5% solids, then air dried, giving light yellow-green pellets.

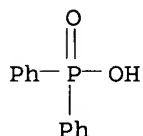
IT 3295-87-2 34405-31-7

RL: USES (Uses)

(aqueous additive emulsions containing, for polymers)

RN 3295-87-2 CAPLUS

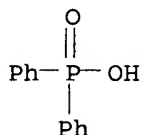
CN Phosphinic acid, diphenyl-, aluminum salt (8CI, 9CI) (CA INDEX NAME)



● 1/3 Al

RN 34405-31-7 CAPLUS

CN Phosphinic acid, diphenyl-, calcium salt (2:1) (8CI, 9CI) (CA INDEX NAME)



● 1/2 Ca

L58 ANSWER 31 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1979:481562 CAPLUS

DOCUMENT NUMBER: 91:81562

TITLE: Electrophotographic plates

INVENTOR(S): Kondo, Hideyo; Toma, Hitoshi

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 53128337	A2	19781109	JP 1977-43280	19770414

PRIORITY APPLN. INFO.: JP 1977-43280 A 19770414

ED Entered STN: 12 May 1984

AB Electrophotog. plates contain a compound having a P-O bond in the main chain in the insulator layer formed on the photoconductor layer. Thus, a Se 10-Te 90% solid solution was vacuum deposited as a 60  $\mu$  photoconductor layer on an Al support and then a composition containing M-60 (a photohardening polyester, from Kansai Paint) and (CF<sub>3</sub>)<sub>2</sub>POP(CF<sub>3</sub>)<sub>2</sub> 5% with respect to M-60 was coated on the photoconductor layer to give an electrophotog. plate having good toner image transfer and cleaning properties.

IT 9003-08-1  
RL: USES (Uses)  
(selenium-tellurium electrophotog. plate insulating layer containing phosphorus oxy compound and)

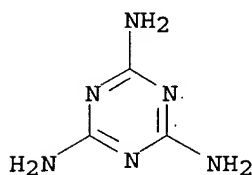
RN 9003-08-1 CAPLUS

CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

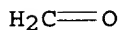
CMF C3 H6 N6



CM 2

CRN 50-00-0

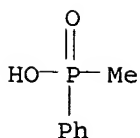
CMF C H2 O



IT 4098-64-0  
RL: USES (Uses)  
(selenium-tellurium electrophotog. plate insulating layer containing, for improved cleaning and toner image transfer properties)

RN 4098-64-0 CAPLUS

CN Phosphinic acid, methylphenyl-, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

L58 ANSWER 32 OF 32 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1979:458157 CAPLUS

DOCUMENT NUMBER: 91:58157

TITLE: Metal salt amine complexes

INVENTOR(S): Stockinger, Friedrich; Eldin, Sameer H.; Lohse, Friedrich

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Ger. Offen., 36 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2847636	A1	19790510	DE 1978-2847636	19781102
DE 2847636	C2	19870507		
CH 629231	A	19820415	CH 1977-13447	19771104
CA 1109882	A1	19810929	CA 1978-315193	19781031
GB 2016489	A	19790926	GB 1978-42901	19781102
GB 2016489	B2	19820415		
FR 2407949	A1	19790601	FR 1978-31117	19781103
FR 2407949	B1	19820611		
JP 54079273	A2	19790625	JP 1978-136229	19781104
			CH 1977-13447	A 19771104

PRIORITY APPLN. INFO.:

ED Entered STN: 12 May 1984

AB Complexes of amine-terminated polyoxyalkylenes with divalent metal salts of sulfonic, phosphonic, or carbonyl-containing N heterocyclic carboxylic acids are used as crosslinking agents for epoxy resins. Thus, a 1:1 complex was formed by heating 0.05 mol Zn bis(5-oxo-2-pyrrolidinecarboxylate) and 0.05 mol Jeffamine D 2000 (amine-terminated polyoxypropylene) in MeOH and drying at 100°/0.1mm. Bisphenol A diglycidyl ether polymer [25085-99-8] of epoxy equivalent 5.2/kg was crosslinked 2 h at 160° and 8 h at 180° with 10 phr complex to give a product with bending strength 12.2 kg/mm<sup>2</sup>, tensile strength 4.1 kg/mm<sup>2</sup>, Martens temperature 124°, temperature for 10% dielec. loss 200°, and glass transition temperature 163°. The uncured composition had pot life (time to reach viscosity 15,000 cP at 40°, with initial viscosity 2640 cP) 70 days.

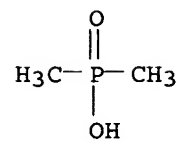
IT 10431-74-0D, reaction products with Jeffamine D 400

RL: MOA (Modifier or additive use); USES (Uses)

(crosslinking agents, for epoxy resins)

RN 10431-74-0 CAPLUS

CN Phosphinic acid, dimethyl-, zinc salt (7CI, 8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

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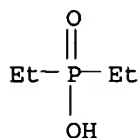
L12 STR  
 L13 SCR 2043  
 L14 SCR 1918  
 L15 ( 1541)SEA FILE=REGISTRY SSS FUL L12 AND (L13 OR L14)  
 L16 ( 1539)SEA FILE=REGISTRY ABB=ON L15/COMPLETE  
 L17 ( 244)SEA FILE=REGISTRY ABB=ON L16 AND (CA OR AL OR ZN)/ELS  
 L18 STR  
 L19 ( 1428)SEA FILE=REGISTRY SUB=L15 SSS FUL L18  
 L20 ( 1426)SEA FILE=REGISTRY ABB=ON L19/COMPLETE  
 L21 ( 210)SEA FILE=REGISTRY ABB=ON L20 AND L17  
 L22 ( 114)SEA FILE=REGISTRY ABB=ON L21 AND NC>1  
 L23 84 SEA FILE=REGISTRY ABB=ON L22 AND SALT  
 L37 133 SEA FILE=CAPLUS ABB=ON L23  
 L61 22144 SEA FILE=CAPLUS ABB=ON ?CARBODIIMIDE?/BI  
 L62 4 SEA FILE=CAPLUS ABB=ON L37 AND L61

=&gt; d ibib ed abs hitstr l62 1-4

L62 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:261027 CAPLUS  
 DOCUMENT NUMBER: 140:288232  
 TITLE: Flame retardant thermosetting plastic compositions  
 INVENTOR(S): Knop, Susanne; Sicken, Martin; Hoerold, Sebastian  
 PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany  
 SOURCE: Eur. Pat. Appl., 15 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1403311	A1	20040331	EP 2003-20514	20030916
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10244576	A1	20040408	DE 2002-10244576	20020925
JP 2004115797	A2	20040415	JP 2003-329719	20030922
PRIORITY APPLN. INFO.:			DE 2002-10244576	A 20020925
OTHER SOURCE(S): MARPAT 140:288232				
ED Entered STN: 31 Mar 2004				
AB Flame retardant compns., containing salt of phosphinic (or diphosphinic) acid (or polymeric derivs. of these salts) and inorg. compds. and/or minerals additives are useful for thermosetting (unsatd. polyester resins and epoxy resins) molded parts and coatings. A composition, containing 10 weight parts of				
aluminum diethylphosphinate and 10 weight parts of zinc borate increases fire-resistance of molded epoxy resins (Beckopox EP 140).				
IT 225789-38-8, Aluminum Diethylphosphinate				
RL: MOA (Modifier or additive use); USES (Uses)				
(flame retardant compns. for unsatd. polyester and epoxy resins, containing salts of phosphinic acid and inorg. compds. and/or minerals additives for molded parts and coatings)				
RN 225789-38-8 CAPLUS				
CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)				





● 1/3 A1

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:261026 CAPLUS

DOCUMENT NUMBER: 140:288231

TITLE: Flame retardant thermosetting plastic compositions

INVENTOR(S): Knop, Susanne; Sicken, Martin; Hoerold, Sebastian

PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1403310	A1	20040331	EP 2003-20513	20030916
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10244578	A1	20040408	DE 2002-10244578	20020925
JP 2004115796	A2	20040415	JP 2003-329718	20030922
US 2004110878	A1	20040610	US 2003-669483	20030924
PRIORITY APPLN. INFO.:			DE 2002-10244578	A 20020925

OTHER SOURCE(S): MARPAT 140:288231

ED Entered STN: 31 Mar 2004

AB Flame retardant compns., containing salt of phosphinic (or diphosphinic) acid (or polymeric derivs. of these salts) and organic or/and inorg. P-containing additives as synergists are useful for thermosetting (unsatd. polyester resins and epoxy resins) molded parts, laminated plastics and coatings. A composition, containing 5 weight parts of aluminum diethylphosphinate and 5 weight parts

of triethylphosphate increases fire-resistance of molded epoxy resins (Beckopox EP 140).

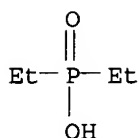
IT 225789-38-8, Aluminum Diethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)

(flame retardant compns. for unsatd. polyester and epoxy resins, containing salt of phosphinic acid and organic or/and inorg. P-containing additives as synergists for molded parts, laminated plastics and coatings)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:261025 CAPLUS

DOCUMENT NUMBER: 140:288230

TITLE: Flame retardant thermosetting plastic compositions

INVENTOR(S): Knop, Susanne; Sicken, Martin; Hoerold, Sebastian

PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 14 pp.

CODEN: EPXXDW

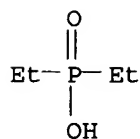
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1403309	A1	20040331	EP 2003-20512	20030916
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10244579	A1	20040408	DE 2002-10244579	20020925
JP 2004115795	A2	20040415	JP 2003-329717	20030922
US 2005049339	A1	20050303	US 2003-669973	20030924
PRIORITY APPLN. INFO.:			DE 2002-10244579	A 20020925
OTHER SOURCE(S): MARPAT 140:288230				
ED Entered STN: 31 Mar 2004				
AB Flame retardant compns., containing salt of phosphinic (or diphosphinic) acid (or polymeric derivs. of these salts) and organic or/and inorg. P- and N-containing additives as synergists are useful for thermosetting (unsatd. polyester resins and epoxy resins) molded parts and coatings. A composition, containing 5 weight parts of aluminum diethylphosphinate (DEPAL), 5 weight parts of triethylphosphate and 5 weight parts of melamine increases fire-resistance of molded epoxy resins (Beckopox EP 140).				
IT 225789-38-8, Aluminum Diethylphosphinate				
RL: MOA (Modifier or additive use); USES (Uses) (flame retardant compns. for unsatd. polyester and epoxy resins, containing salt of phosphinic acid and organic or/and inorg. P- and N-containing additives as synergists for molded parts and coatings.)				
RN 225789-38-8 CAPLUS				
CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)				



● 1/3 A1

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:628029 CAPLUS

DOCUMENT NUMBER: 139:181087

TITLE: Halogen-free fire-resistant polymer compositions, their manufacture, and their moldings

INVENTOR(S): Harashina, Hatsuhiko

PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 38 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003226818	A2	20030815	JP 2002-348568	20021129
PRIORITY APPLN. INFO.:			JP 2001-368007	A 20011130

ED Entered STN: 15 Aug 2003

AB The comps. comprise (A) base polymers, (B) ≥1 fireproofing agent chosen from (a) composite salts of amino-containing N compds. and polyphosphoric acid, (b) salts of amino-containing N compds. and polymetaphosphoric acid, (c) polyphosphoric acid amides, (d) salts of amino-containing N compds. with sulfuric acid, pyrosulfuric acid, organic sulfonic acids, organic phosphonic acids, or organic phosphinic acids, and (e) cyclic urea compds., and (C) ≥1 fireproofing aid chosen from (f) P compds., (g) aromatic polymers, and (h) inorg. acid metal salts. Thus, a composition containing Duranex (polybutylene terephthalate) 100, Apinon 901 (melamine sulfate) 30, PX 200 [resorcinol bis(di-2,6-xylylphosphate)] 20, Irganox 1010 [pentaerythritol tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate]] 0.5, calcium carbonate 2, bisphenol A diglycidyl ether 2, PTFE 1, and glass chopped strand 30 parts was injection-molded to give a test piece showing UL-94 rating V-0 and good moldability.

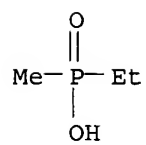
IT 176316-86-2, Aluminum ethylmethylphosphinate

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(fireproofing aid; halogen-free fire-resistant polymer comps.)

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

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L12 STR  
 L13 SCR 2043  
 L14 SCR 1918  
 L15 ( 1541)SEA FILE=REGISTRY SSS FUL L12 AND (L13 OR L14)  
 L16 ( 1539)SEA FILE=REGISTRY ABB=ON L15/COMPLETE  
 L17 ( 244)SEA FILE=REGISTRY ABB=ON L16 AND (CA OR AL OR ZN)/ELS  
 L18 STR  
 L19 ( 1428)SEA FILE=REGISTRY SUB=L15 SSS FUL L18  
 L20 ( 1426)SEA FILE=REGISTRY ABB=ON L19/COMPLETE  
 L21 ( 210)SEA FILE=REGISTRY ABB=ON L20 AND L17  
 L22 ( 114)SEA FILE=REGISTRY ABB=ON L21 AND NC>1  
 L23 84 SEA FILE=REGISTRY ABB=ON L22 AND SALT  
 L37 133 SEA FILE=CAPLUS ABB=ON L23  
 L64 23929 SEA FILE=CAPLUS ABB=ON FIREPROOFING AGENTS/CT  
 L65 19376 SEA FILE=CAPLUS ABB=ON FIRE-RESISTANT MATERIALS/CT  
 L66 9776 SEA FILE=CAPLUS ABB=ON FIREPROOFING/CT  
 L67 63 SEA FILE=CAPLUS ABB=ON L37 AND (L64 OR L65 OR L66)  
 L68 73456 SEA FILE=CAPLUS ABB=ON THERMOPLASTIC#/OBI OR THERMO/OBI (L) PLAS  
 TIC#/OBI  
 L69 17 SEA FILE=CAPLUS ABB=ON L67 AND L68

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L69 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:50821 CAPLUS

DOCUMENT NUMBER: 142:135636

TITLE: Elastic covering materials with improved flame-retardant properties and a method for producing the same.

INVENTOR(S): Bauer, Harald; Deger, Hans-Matthias; Krause, Werner

PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1498449	A2	20050119	EP 2004-15722	20040703
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
DE 10331888	A1	20050217	DE 2003-10331888	20030714
US 2005011401	A1	20050120	US 2004-890068	20040713
JP 2005036230	A2	20050210	JP 2004-206242	20040713
PRIORITY APPLN. INFO.:			DE 2003-10331888	A 20030714

OTHER SOURCE(S): MARPAT 142:135636

ED Entered STN: 20 Jan 2005

AB Elastic covering materials (linoleum, thermoplastics, polyvinylchloride, rubber-gummy-combinations, cork, polyurethanes, styrene-butadiene latexes) with improved flame-retardant properties contain 0.01 - 40 weight% of a fireproofing agent comprising salts of phosphinic or diphosphinic acid, melamine derivs. and condensation products of melamine, ammonium phosphates, solid fillers. Thus, a linoleum prepared from a composition containing 40 weight% of a cement, 26.7 weight% of a chalk, 27 weight% of a wood flour, 3 weight%

of a cork flour and 0.3 weight% of a fireproofing agent Exolit OP1230 has flammability classification B according DIN 4102.

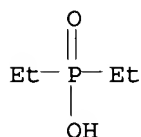
IT 225789-38-8

RL: TEM (Technical or engineered material use); USES (Uses)

(elastic covering materials having fireproofing agent from salts of phosphinic or diphosphinic acid, melamine derivs. and/or condensation products of melamine, ammonium phosphates and solid fillers)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L69 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:50820 CAPLUS

DOCUMENT NUMBER: 142:135635

TITLE: Preparation of flame protection agent.

INVENTOR(S): Knop, Susanne; Sicken, Martin; Hoerold, Sebastian

PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1498448	A1	20050119	EP 2004-15724	20040703
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
DE 10331887	A1	20050217	DE 2003-10331887	20030714
US 2005014875	A1	20050120	US 2004-890427	20040713
JP 2005036229	A2	20050210	JP 2004-206241	20040713
PRIORITY APPLN. INFO.:			DE 2003-10331887	A 20030714

OTHER SOURCE(S): MARPAT 142:135635

ED Entered STN: 20 Jan 2005

AB A fireproofing agent for thermoplastic molded plastics and thermosetting resins consisting of 90 - 99.9 weight% of salts of phosphinic or diphosphinic acids, 0 - 50 weight% of P- or/and N-containing compds. (such as condensation products of melamine derivs. with phosphoric or polyphosphoric acid) and 0.1 - 10 weight% of a liquid component and, optionally fillers and other additives. Thus, an unsatd. polyester resin dissolved in styrene (Palatal 340S) containing 25 weight parts of a fireproofing agent consisting of 94 weight% of

aluminum diethylphosphinate (DEPAL), 1 weight% of melamine polyphosphate and 5 weight% of a liquid component (Apolit SUP 403BMT), laminated on textile exhibits an oxygen index (LOI) 39 and is stable (no indication of delamination) after keeping 1 h at 120°.

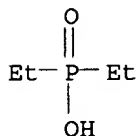
IT 225789-38-8, Aluminum diethylphosphinate

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(fireproofing agent for **thermoplastic** molded plastics and thermosetting resins containing salts of phosphinic or diphosphinic acids, P- or/and N-containing compds and a liquid component)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L69 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:985907 CAPLUS

DOCUMENT NUMBER: 141:396318

TITLE: Halogenated flame retardant compositions for **thermoplastics**.

INVENTOR(S): Hoerold, Sebastian; Knop, Susanne; Sicken, Martin

PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1477520	A2	20041117	EP 2004-10540	20040504
EP 1477520	A3	20050126		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
DE 10321298	A1	20041209	DE 2003-10321298	20030513
JP 2004339510	A2	20041202	JP 2004-139072	20040507
US 2005004277	A1	20050106	US 2004-840861	20040507
PRIORITY APPLN. INFO.:			DE 2003-10321298	A 20030513

OTHER SOURCE(S): MARPAT 141:396318

ED Entered STN: 18 Nov 2004

AB The fire resistance of thermoplastic polymers is improved by addition of a fireproofing agent consisting of a mixture containing 0.1 - 50 weight% of salts of

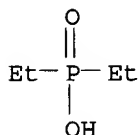
(di)phosphinic acid, 0.1 - 30 weight% of halogen-containing compds. as synergetic, and, optionally, 0 - 5 weight% of P- and/or N-containing compds.

and

0 - 30 weight% of synthetic- or mineral inorg. compds. Thus, a glass-fiber-reinforced polyamide 6,6 composition containing fireproofing agent consisting of 10 weight% of aluminum diethylphosphinate and 10 weight% of brominated polystyrene (Saytex 7010) exhibits flammability rating (UL-94, 0.8 mm) V-0 and incandescent filament temperature (glow-wire ignitability test)

850°.

IT 225789-38-8, Aluminum diethylphosphinate  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (fireproofing agent component; fireproofing agent for **thermoplastics** consisting of salts of (di)phosphinic acid and halogen-containing compds and, optionally P- and/or N-containing compds. and inorg. fillers)  
 RN 225789-38-8 CAPLUS  
 CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L69 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:960082 CAPLUS

DOCUMENT NUMBER: 141:380642

TITLE: Fireproofing agent nano compositions for **thermoplastic** polymers

INVENTOR(S): Hoerold, Sebastian

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1475407	A2	20041110	EP 2004-10429	20040503
EP 1475407	A3	20050112		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
DE 10320465	A1	20041202	DE 2003-10320465	20030508
US 2004225040	A1	20041111	US 2004-840163	20040506
JP 2004331975	A2	20041125	JP 2004-137437	20040506

PRIORITY APPLN. INFO.: DE 2003-10320465 A 20030508

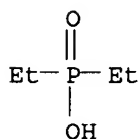
OTHER SOURCE(S): MARPAT 141:380642

ED Entered STN: 11 Nov 2004

AB The title compns. for thermoplastic polymers comprise (a) 2-20 weight% of (di)phosphinic acid salts of specified structure or their polymers, (b) 1-30 weight% of condensation products of melamine with phosphoric- or polyphosphoric acid, and (c) 0.05 - 20 weight% of a nano-filler, such as layered intercalated with organic compds. silicates, nanospherical oxides or/and carbon nano-tubes and are useful for molded plastics. Thus, a PA 6.6-based flame resistant molded plastic containing 10 weight% of aluminum diethylphosphinate, 5 weight% of melamine polyphosphate and 2 weight% of nano-filler (Nanofil 919) has flammability rating (UL-94, 0.8 mm) V-0 and color white.



IT 225789-38-8, Aluminum Diethylphosphinate  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (fireproofing nanocomposition for **thermoplastic** polymers containing salts of (di)phosphinic acid and condensation products of melamine with phosphoric- or polyphosphoric acid)  
 RN 225789-38-8 CAPLUS  
 CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

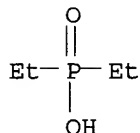
L69 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:732271 CAPLUS  
 DOCUMENT NUMBER: 141:244379  
 TITLE: Fireproofing agent-stabilizer combination for **thermoplastics**  
 INVENTOR(S): Hoerold, Sebastian; Schacker, Ottmar  
 PATENT ASSIGNEE(S): Clariant GmbH, Germany  
 SOURCE: Eur. Pat. Appl., 21 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1454948	A2	20040908	EP 2004-3957	20040221
EP 1454948	A3	20050202		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10309385	A1	20040923	DE 2003-10309385	20030303
JP 2004263188	A2	20040924	JP 2004-58009	20040302
US 2004227130	A1	20041118	US 2004-791624	20040302
PRIORITY APPLN. INFO.:			DE 2003-10309385	A 20030303
OTHER SOURCE(S): MARPAT 141:244379				
ED Entered STN: 09 Sep 2004				
AB The title combinations comprise (di)phosphinic acid salts of specified structure or their polymers 25-99.9, N-containing synergists or P-N fireproofing agents 10-75, basic or amphoteric (hydr)oxides, carbonates, silicates, borates, and/or stannates 0.1-50, and phosphonites of specified structure 0-5%. A mixture of Nylon-66 54, glass fibers 30, Al diethylphosphinate 10, melamine polyphosphate (Melapur 200) 5, Zn borate 0.5, and montan wax acid Ca salt (Licamont CaV 102) 0.5% had flammability rating (UL-94, 1.6 mm) V-0, melt index (275°/2.16 kg) 6, breaking elongation 4.8%, impact strength 61 kJ/m2, notched impact strength 9.4 kJ/m2, and color white.				
IT 225789-38-8, Aluminum diethylphosphinate RL: MOA (Modifier or additive use); USES (Uses)				

(fireproofing agent-stabilizer combination for **thermoplastics**)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L69 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:220392 CAPLUS

DOCUMENT NUMBER: 140:254413

TITLE: Fireproofing agent-stabilizer compositions for **thermoplastic** polymers

INVENTOR(S): Hoerold, Sebastian; Wanzke, Wolfgang; Schacker, Ottmar; Nass, Bernd; Sicken, Martin

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

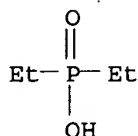
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004022640	A1	20040318	WO 2003-EP9434	20030826
W: CA, CN, JP, KR, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
DE 10241126	A1	20040325	DE 2002-10241126	20020903
PRIORITY APPLN. INFO.:			DE 2002-10241126	A 20020903
OTHER SOURCE(S):			MARPAT 140:254413	

ED Entered STN: 19 Mar 2004

AB A fireproofing agent-stabilizer composition for thermoplastic polymers comprises (A) 25-99.9% of a phosphinic acid salt of the formula  $[\text{R}_1\text{R}_2\text{P}(\text{O})-\text{O}]_m^-$  Mm+ and/or a diphosphinic acid salt of the formula  $[\text{O}-\text{P}(\text{O})\text{R}_1-\text{R}_3-\text{P}(\text{O})\text{R}_2-\text{O}]_n^{2-}$  Mxm+ and/or their polymers, where R1 and R2 are the same or different and represent linear or branched C1-C6-alkyl and/or aryl; R3 represents linear or branched C1-C10-alkylene, C6-C10-arylene, alkylarylene, or arylalkylene; M represents Mg, Ca, Al, Sb, Sn, Ge, Ti, Zn, Fe, Zr, Ce, Bi, Sr, Mn, Li, Na, K, and/or a protonated amine; m is 1-4; n is 1-4; x is 1-4, (B) 0-75% of melamine polyphosphate, (C) 0.1-50% of a basic or amphoteric oxide, hydroxide, carbonate, silicate, borate, stannate, mixed oxide-hydroxide, oxide-hydroxide-carbonate, hydroxide-silicate, hydroxide-borate, or their mixts., the total of the components (A), (B) and (C) being 100%. Thus, a fire-resistant thermoplastic composition was produced by extrusion at 260-310° of glass fiber-reinforced polyamide 66 (Durethan AKV 30), aluminum diethylphosphinate (10), melamine polyphosphate (Melapur 200) (5), and zinc oxide (2%).

IT 225789-38-8, Aluminum diethylphosphinate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (fireproofing agent-stabilizer compns. for thermoplastic polymers)  
 RN 225789-38-8 CAPLUS  
 CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L69 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:202082 CAPLUS

DOCUMENT NUMBER: 140:236560

TITLE: Surface modified phosphinic acid salts

INVENTOR(S): Hoerold, Sebastian; Heinrichs, Franz-Leo; Jung, Elisabeth

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1396524	A1	20040310	EP 2003-18723	20030826
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10241373	A1	20040318	DE 2002-10241373	20020906
US 2004049063	A1	20040311	US 2003-655886	20030905
JP 2004099614	A2	20040402	JP 2003-314470	20030905
PRIORITY APPLN. INFO.:			DE 2002-10241373	A 20020906

OTHER SOURCE(S): MARPAT 140:236560

ED Entered STN: 12 Mar 2004

AB The processability of phosphinic acid salt fireproofing agents in thermoplastic polymers is improved by coating the salts with synthetic polymers or waxes.

IT 176316-86-2, Aluminum ethylmethylphosphinate 225789-38-8

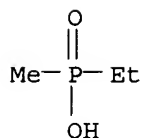
, Aluminum diethylphosphinate

RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(phosphinic acid salt fireproofing agents surface modified by polymers or waxes for improved processability in thermoplastic polymers)

RN 176316-86-2 CAPLUS

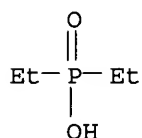
CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L69 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:200115 CAPLUS

DOCUMENT NUMBER: 140:236547

TITLE: Compacted flame retardant composition

INVENTOR(S): Bauer, Harald; Hoerold, Sebastian; Krause, Werner;  
Sicken, Martin

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

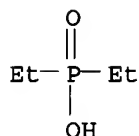
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1396523	A1	20040310	EP 2003-18726	20030826
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10241376	A1	20040318	DE 2002-10241376	20020906
JP 2004099894	A2	20040402	JP 2003-314473	20030905
PRIORITY APPLN. INFO.:			DE 2002-10241376	A 20020906
OTHER SOURCE(S): MARPAT 140:236547				
ED Entered STN: 12 Mar 2004				
AB Powdered fire retardant compns. based on ≥1 of P-containing compds., minerals, and N-containing compds. for plastics exhibit decreased dusting when compacted optionally in the presence of a compacting aid such as waxes.				
IT 225789-38-8, Aluminum diethylphosphinate				
RL: MOA (Modifier or additive use); USES (Uses)				
(compacted powdered fire retardant compns. based on phosphorus-containing				

compds., minerals or nitrogen-containing compds. and optionally compacting aids with decreased dusting for plastics)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L69 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:200114 CAPLUS

DOCUMENT NUMBER: 140:236546

TITLE: Granular fire retardant composition

INVENTOR(S): Bauer, Harald; Hoerold, Sebastian; Krause, Werner; Sicken, Martin

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Eur. Pat. Appl., 15 pp.

CODEN: EPXXDW

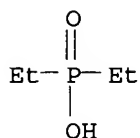
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1396522	A1	20040310	EP 2003-18725	20030826
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10241375	A1	20040318	DE 2002-10241375	20020906
JP 2004099893	A2	20040402	JP 2003-314472	20030905
PRIORITY APPLN. INFO.:			DE 2002-10241375	A 20020906
OTHER SOURCE(S): MARPAT 140:236546				
ED Entered STN: 12 Mar 2004				
AB Fire retardant compns. based on a binder and ≥1 of P-containing compds., minerals, and N-containing compds. exhibit improved dispersion in the granular form in plastics.				
IT 225789-38-8, Aluminum diethylphosphinate				
RL: MOA (Modifier or additive use); USES (Uses)				
(granular fire retardant compns. based on binders and phosphorus-containing compds., minerals or nitrogen-containing compds.)				
RN 225789-38-8 CAPLUS				
CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)				



● 1/3 A1

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L69 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:138727 CAPLUS

DOCUMENT NUMBER: 140:182434

TITLE: Dust free, powdered flame retardant composition, procedure for their production and their use, as well as flame retardant polymer molding materials

INVENTOR(S): Bauer, Harald; Hoerold, Sebastian; Krause, Werner; Sicken, Martin

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Ger., 14 pp.  
CODEN: GWXXAW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10241374	B3	20040219	DE 2002-10241374	20020906
EP 1396521	A1	20040310	EP 2003-18724	20030826
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004099892	A2	20040402	JP 2003-314471	20030905
US 2005032958	A1	20050210	US 2003-656313	20030905
PRIORITY APPLN. INFO.:			DE 2002-10241374	A 20020906

OTHER SOURCE(S): MARPAT 140:182434

ED Entered STN: 20 Feb 2004

AB A dust free, powdered flame retardant composition, containing salts of P-containing acids

or/and their polymers optionally with synthetic or mineral inorg. compds. and, optionally, N-containing heterocycles, as fireproofing agents and alkyl alkoxylates, natural, modified or synthetic waxes, paraffin and mineral (optionally chlorinated) oil, modified and substituted siloxanes, castor oil, glycerol, di-2-ethylhexyl phthalate, phthalic acid polyester, aromatic and aliphatic esters of phosphoric acid, anionic polyester-polyurethane, polyglycoles as dust reduction additives (optionally added as aqueous suspensions)

is useful for molded plastics, films, threads and fibers. A composition, containing reaction product of melamine polyphosphate (Melapur MP), with aluminum diethylphosphinate and alcoxylated alc. (Genapol 2882) increases fire-resistance of polybutylene terephthalate.

IT 225789-38-8P, Aluminum diethylphosphinate

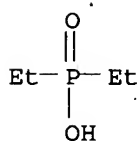
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(flame retardant composition for molded plastics, containing salts of phosphinic

or diphosphinic acids or/and their polymers in mixture with inorg. compds. and, optionally, N-containing heterocycles and dust reduction additives)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L69 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:97241 CAPLUS

DOCUMENT NUMBER: 140:147040

TITLE: Flame retardant combination

INVENTOR(S): Schlosser, Elke; Nass, Bernd; Wanzke, Wolfgang

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

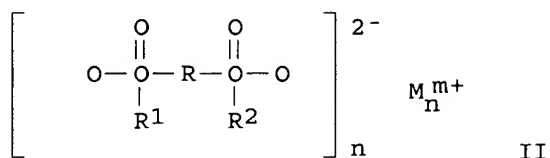
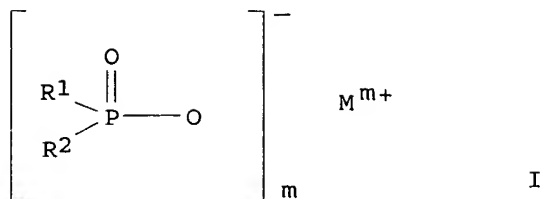
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1386942	A1	20040204	EP 2003-8309	20030410
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004059929	A2	20040226	JP 2003-279189	20030724
PRIORITY APPLN. INFO.:			EP 2002-16642	A 20020725
			EP 2003-8309	A 20030410

OTHER SOURCE(S): MARPAT 140:147040

ED Entered STN: 06 Feb 2004

GI



AB The invention relates to a flame retardant combination comprising A, a phosphinate of the formula (I) and/or a diphosphinate of the formula (II) and/or polymers of these where R1 and R2 are identical or different and are C1-C6-alkyl, linear or branched, and/or aryl; R3 is C1-C10-alkylene, linear or branched, C6-C10-arylene, -alkyl-arylene or -aryl-alkylene; M is Ca ions, Mg ions, Al ions and/or Zn ions, m is 2 or 3; n is 1 or 3; x is 1 or 2; and comprising a component B1, B2 and/or B3 wherein B1 is a salt of 1,3,5-triazine compound with polyphosphoric acid, and wherein B2 is a melamine polymetaphosphate, and wherein B3 is a composite salt of polyphosphoric acid with melamine, melam and/or melem.

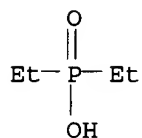
IT 225789-38-8, Aluminum diethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)

(combination of metal salts of phosphinates and triazines and polyphosphoric acid as flame retardants for **thermoplastic** molding materials)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L69 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:57314 CAPLUS

DOCUMENT NUMBER: 140:94983

TITLE: Flame retardant combination and flame retardant



**thermoplastic** molding materials  
 INVENTOR(S): Wagener, Reinhard; Budzinsky, Winfried; Hueckstaedt, Hanno  
 PATENT ASSIGNEE(S): Ticona G.m.b.H., Germany  
 SOURCE: Ger. Offen., 14 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10317487	A1	20040122	DE 2003-10317487	20030416
PRIORITY APPLN. INFO.:			DE 2003-10317487	20030416

OTHER SOURCE(S): MARPAT 140:94983

ED Entered STN: 23 Jan 2004

AB Two-component mixture of (A) phosphinic acid salts  $(O:PR_1R_2O)_m-Mm+$  or diphosphinic acid salts  $[OP:O(R_1)R_3P:O(R_2)O]_n2-Mxm+$  ( $R_1$  and  $R_2$  = alkyl, cycloalkyl or aryl,  $R_3$  = alkylene, cycloalkylene, arylene, alkylarylene or arylalkylene,  $M$  = Mg, Ca, Al or Zn,  $m$  = 2-3,  $n$  = 1 - 3,  $x$  = 1-2) with another P-containing compound B (phosphine, diphosphine, hypophosphites, phosphites, phosphineoxide, phosphonates, hypodiphosphates, phosphates, esters of P-containing acids, including cyclic esters of phosphonic acid and phosphates with multifunctional alcs.) and, optionally, with N-heterocyclic or N-containing C are prepared as flame-retardants for thermoplastic molding materials. As an example, addition the 20-22.5% mixture of Al salt of methane-ethane phosphinic acid (A) with resorcinol bis(di-Ph phosphate) (B) and melamine cyanurate (C) improves the flame resistance of polybutylene terephthalate.

IT 176316-86-2D, Aluminum, Ethylmethylphosphinate, Al salt

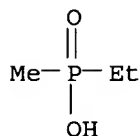
225789-38-8, Aluminum, Diethylphosphinate

RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES (Uses)

(mixture of phosphinic or diphosphinic acid salts with phosphates and, optionally, with N-heterocyclic or N-containing compds. as flame-retardants for **thermoplastic** molding materials)

RN 176316-86-2 CAPLUS

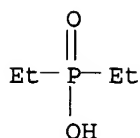
CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L69 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:874441 CAPLUS  
 DOCUMENT NUMBER: 136:6980  
 TITLE: Fire-resistant **thermoplastic** compositions  
 INVENTOR(S): Asano, Takayuki  
 PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001335699	A2	20011204	JP 2000-159787	20000530
PRIORITY APPLN. INFO.:			JP 2000-159787	20000530

OTHER SOURCE(S): MARPAT 136:6980

ED Entered STN: 04 Dec 2001

AB The title compns., useful for injection molding, comprise (a) thermoplastics selected  $\geq 2$  from styrene polymers (e.g., ABS), aromatic polyesters (e.g., Duranex 2000), polyamides (e.g., 2020B), polycarbonates (e.g., Panlite L 1225), and polyoxyphenylenes (e.g., Blendex HPP 820), (b) phosphonic acid salts (e.g., Al dimethylphosphinate), and optionally (c) fireproofing auxiliaries (e.g., MC 610, Kisuma 5E) and/or (d) fillers (e.g., powdered glass).

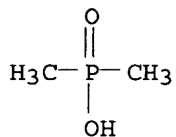
IT 25789-24-6, Aluminum dimethylphosphinate

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(fire-resistant **thermoplastic** compns.)

RN 25789-24-6 CAPLUS

CN Phosphinic acid, dimethyl-, aluminum salt (8CI, 9CI) (CA INDEX NAME)



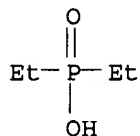
● 1/3 A1

L69 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:62409 CAPLUS  
 DOCUMENT NUMBER: 134:116657  
 TITLE: Combinations of phosphinic acid derivatives and melamine derivatives for fireproofing agents for thermoplastic polymers  
 INVENTOR(S): Schlosser, Elke; Nass, Bernd; Wanzke, Wolfgang  
 PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany  
 SOURCE: Eur. Pat. Appl., 11 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

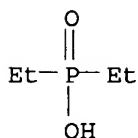
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1070754	A2	20010124	EP 2000-114379	20000705
EP 1070754	A3	20030917		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19933901	A1	20010201	DE 1999-19933901	19990722
US 6255371	B1	20010703	US 2000-617473	20000717
JP 2001072978	A2	20010321	JP 2000-221129	20000721
PRIORITY APPLN. INFO.:			DE 1999-19933901	A 19990722

OTHER SOURCE(S): MARPAT 134:116657  
 ED Entered STN: 26 Jan 2001  
 AB Combinations of (a) [R1R2P(:O)O]m-Mm+ or [OR1P(:O)R3P(:O)R2O]n2-Mxm+ (R1, R2 = C1-6 alkyl or aryl; R3 = C1-10 alkylene, C6-10 arylene, or C6-10 arylalkylene; M = Ca, Mg, Al, or Zn; m = 2 or 3, n = 1 or 3, x = 1 or 2) and (b) melamine (I) condensates, I phosphate, or I condensate-H3PO4 adducts are useful as fireproofing agents for thermoplastic polymers.  
 IT 225789-38-8, Aluminum diethylphosphinate 284685-45-6, Zinc diethylphosphinate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (combinations of phosphinic acid derivs. and melamine derivs. for fireproofing agents for thermoplastic polymers)  
 RN 225789-38-8 CAPLUS  
 CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

RN 284685-45-6 CAPLUS  
 CN Phosphinic acid, diethyl-, zinc salt (9CI) (CA INDEX NAME)



● 1/2 Zn

L69 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:534867 CAPLUS

DOCUMENT NUMBER: 133:151408

TITLE: Combination of flame retardants for  
**thermoplastic** polymers

INVENTOR(S): Schlosser, Elke; Nass, Bernd; Wanzke, Wolfgang

PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1024167	A1	20000802	EP 2000-100470	20000111
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19960671	A1	20000907	DE 1999-19960671	19991215
JP 2000219772	A2	20000808	JP 2000-19204	20000127
US 6547992	B1	20030415	US 2000-496025	20000129
PRIORITY APPLN. INFO.:			DE 1999-19903708	A 19990130
			DE 1999-19960671	A 19991215

OTHER SOURCE(S): MARPAT 133:151408

ED Entered STN: 04 Aug 2000

AB Combining N-free, synthetic inorg. compds. and(or) minerals and, optionally, N-containing compds. with phosphinate and(or) diphosphinate salts of Ca, Al, and(or) Zn improved the fireproofing ability of the latter compds. in thermoplastic polymers. A typical composition contained Celanex 2300 GV1/30 (glass fiber-filled polybutylene terephthalate), 15% Al diethylphosphinate, and 1% CEEPREE Microfine.

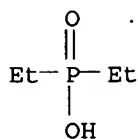
IT **225789-38-8**, Aluminum diethylphosphinate **284685-45-6**, Zinc diethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)

(combination of nitrogen-free synthetic inorg. compds. or minerals and (di)phosphinate salts of calcium, aluminum, or zinc as flame retardants for **thermoplastic** polymers)

RN 225789-38-8 CAPLUS

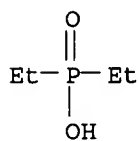
CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

RN 284685-45-6 CAPLUS

CN Phosphinic acid, diethyl-, zinc salt (9CI) (CA INDEX NAME)



● 1/2 Zn

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L69 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:8062 CAPLUS

DOCUMENT NUMBER: 130:53152

TITLE: Fire-resistant **thermoplastic** polyester compositions containing nitrogenous organic compounds and phosphinic acid salts

INVENTOR(S): Hanabusa, Kazuhito; Matsushima, Mitsunori

PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan

SOURCE: PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9856857	A1	19981217	WO 1998-JP2625	19980615
W: CN, KR, SG, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 11060924	A2	19990305	JP 1998-166462	19980615
EP 919591	A1	19990602	EP 1998-924622	19980615
EP 919591	B1	20031001		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AT 251202	E	20031015	AT 1998-924622	19980615
US 6433045	B1	20020813	US 1998-214497	19981230
PRIORITY APPLN. INFO.:			JP 1997-156533	A 19970613
			WO 1998-JP2625	W 19980615

OTHER SOURCE(S): MARPAT 130:53152

ED Entered STN: 06 Jan 1999

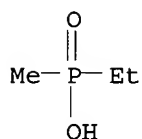
AB The composition, useful elec. and electronic parts, comprises (A) 100 parts thermoplastic polyester resin, (B) 5-40 parts phosphinic acid salt  $[R_1(R_2)P(O)O]_mM$  and/or diphosphinic acid salt or its polymer  $-[O(O)P(R_1)R_3P(R_2)(O)O]_nM_x$  ( $R_1, R_2 = C1-6$  alkyl, phenyl;  $R_3 = C1-10$  alkylene, arylene, alkylarylene, arylalkylene;  $M = Ca, Al$  ions;  $M = 2, 3$ ;  $n = 1, 3$ ; and  $x = 1, 2$ ), and (C) 1-35 parts nitrogenous organic compds. The polyester compns. have good flame retardancy even without containing a halogenated flame retardant, mech. properties, moldability, and thermal stability in residence. Thus, 100 parts poly(butylene terephthalate) was mixed with ethane-1,2-bis(Me phosphinic acid) calcium salt 12 and MC 610 (Melamine cyanurate) 5 parts and molded to give a test piece showing UL 94 flammability rating V-0, tensile strength 48 MPa initially and 47 MPa after and thermal residence at 260° for 30 min.

IT 176316-86-2, Aluminum ethylmethylphosphinate 195516-35-9

RL: MOA (Modifier or additive use); USES (Uses)  
(fireproofing agent; fire-resistant **thermoplastic** polyester compns. containing nitrogenous organic compds. and phosphinic acid salts)

RN 176316-86-2 CAPLUS

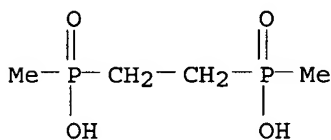
CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

RN 195516-35-9 CAPLUS

CN Phosphinic acid, 1,2-ethanediylbis[methyl-, calcium salt (1:1) (9CI) (CA INDEX NAME)



● Ca

REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L69 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1983:423594 CAPLUS

DOCUMENT NUMBER: 99:23594

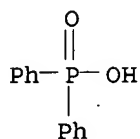
TITLE: Self-extinguishing **thermoplastic** molding compositions

INVENTOR(S): Hambrecht, Juergen; Muench, Volker; Brandstetter, Franz; Naarmann, Herbert; Priebe, Edmund

PATENT ASSIGNEE(S): BASF A.-G. , Fed. Rep. Ger.  
 SOURCE: Ger. Offen., 14 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

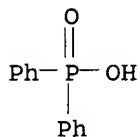
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3140520	A1	19830421	DE 1981-3140520	19811013
PRIORITY APPLN. INFO.:			DE 1981-3140520	19811013

ED Entered STN: 12 May 1984  
 AB Inorg. coordination polymers containing organic phosphinate units are used as fireproofing agents for blends of 30-90 parts polyoxyphenylenes and 10-70 parts vinylarene polymers. Thus, a mixture of polystyrene [9003-53-6] 27, poly[oxy(2,6-dimethyl-1,4-phenylene)] [24938-67-8] 63, and Ph<sub>2</sub>P(O)ONa polymer [85947-33-7] 10 parts had fire resistance rating VE-0 (UL 94) and Vicat softening temperature 163°.  
 IT 10431-73-9 85947-32-6  
 RL: USES (Uses)  
 (fireproofing agents, for polyoxyphenylene-polystyrene blends)  
 RN 10431-73-9 CAPLUS  
 CN Phosphinic acid, diphenyl-, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

RN 85947-32-6 CAPLUS  
 CN Phosphinic acid, diphenyl-, aluminum salt, homopolymer (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 3295-87-2  
 CMF C12 H11 O2 P . 1/3 Al



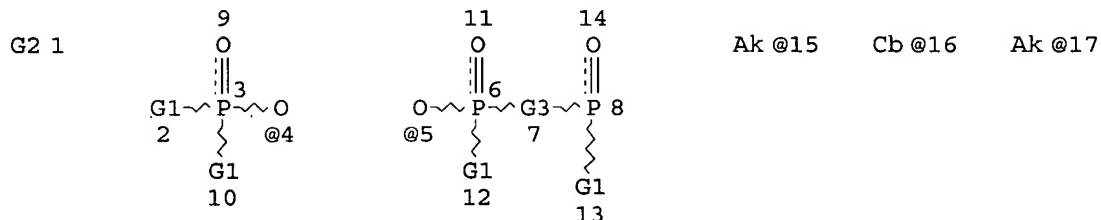
● 1/3 Al

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L12 STR



Ak—Cb  
@18 @19

VAR G1=15/16

VAR G2=4/5

VAR G3=17/CB/18-6 19-8/18-8 19-6

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 15

CONNECT IS E2 RC AT 17

CONNECT IS E2 RC AT 18

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 16

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L13 SCR 2043

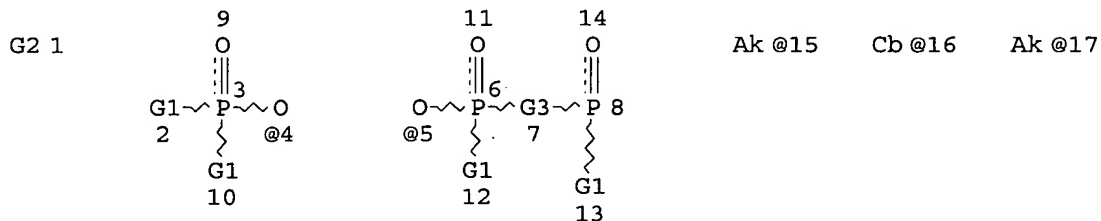
L14 SCR 1918

L15 ( 1541)SEA FILE=REGISTRY SSS FUL L12 AND (L13 OR L14)

L16 ( 1539)SEA FILE=REGISTRY ABB=ON L15/COMPLETE

L17 ( 244)SEA FILE=REGISTRY ABB=ON L16 AND (CA OR AL OR ZN)/ELS

L18 STR



Ak—Cb  
@18 @19

VAR G1=15/16

VAR G2=4/5



VAR G3=17/CB/18-6 19-8/18-8 19-6

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 15  
CONNECT IS E1 RC AT 16  
CONNECT IS E2 RC AT 17  
CONNECT IS E2 RC AT 18  
DEFAULT MLEVEL IS ATOM  
GGCAT IS UNS AT 16  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L19 ( 1428)SEA FILE=REGISTRY SUB=L15 SSS FUL L18  
L20 ( 1426)SEA FILE=REGISTRY ABB=ON L19/COMPLETE  
L21 ( 210)SEA FILE=REGISTRY ABB=ON L20 AND L17  
L22 ( 114)SEA FILE=REGISTRY ABB=ON L21 AND NC>1  
L23 84 SEA FILE=REGISTRY ABB=ON L22 AND SALT  
L37 133 SEA FILE=CAPLUS ABB=ON L23  
L75 3800 SEA FILE=CAPLUS ABB=ON (MELAM OR MELEM OR MELON)/BI  
L77 3 SEA FILE=REGISTRY ABB=ON 1502-47-2 OR 3576-88-3 OR 32518-77-7  
L78 253 SEA FILE=CAPLUS ABB=ON L77  
L79 8 SEA FILE=CAPLUS ABB=ON L37 AND (L75 OR L78)

=> d ibib ed abs hitstr l79 1-8

L79 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:960082 CAPLUS

DOCUMENT NUMBER: 141:380642

TITLE: Fireproofing agent nano compositions for thermoplastic polymers

INVENTOR(S): Hoerold, Sebastian

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1475407	A2	20041110	EP 2004-10429	20040503
EP 1475407	A3	20050112		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
DE 10320465	A1	20041202	DE 2003-10320465	20030508
US 2004225040	A1	20041111	US 2004-840163	20040506
JP 2004331975	A2	20041125	JP 2004-137437	20040506
PRIORITY APPLN. INFO.:			DE 2003-10320465	A 20030508

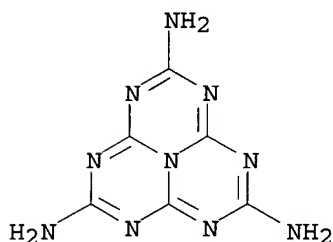
OTHER SOURCE(S): MARPAT 141:380642

ED Entered STN: 11 Nov 2004

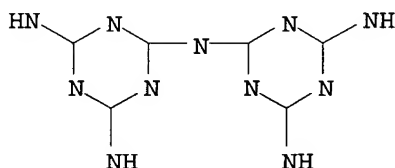
AB The title comps. for thermoplastic polymers comprise (a) 2-20 weight% of (di)phosphinic acid salts of specified structure or their polymers, (b) 1-30 weight% of condensation products of melamine with phosphoric- or polyphosphoric acid, and (c) 0.05 - 20 weight% of a nano-filler, such as

layered intercalated with organic compds. silicates, nanospherical oxides or/and carbon nano-tubes and are useful for molded plastics. Thus, a PA 6.6-based flame resistant molded plastic containing 10 weight% of aluminum diethylphosphinate, 5 weight% of melamine polyphosphate and 2 weight% of nano-filler (Nanofil 919) has flammability rating (UL-94, 0.8 mm) V-0 and color white.

- IT 1502-47-2D, Melem, reaction products with polyphosphoric acid 3576-88-3D, Melam, reaction products with polyphosphoric acid 32518-77-7D, reaction products with polyphosphoric acid 225789-38-8, Aluminum Diethylphosphinate  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (fireproofing nanocomposition for thermoplastic polymers containing salts of (di)phosphinic acid and condensation products of melamine with phosphoric- or polyphosphoric acid)
- RN 1502-47-2 CAPLUS
- CN 1,3,4,6,7,9,9b-Heptaazaphenalene-2,5,8-triamine (9CI) (CA INDEX NAME)

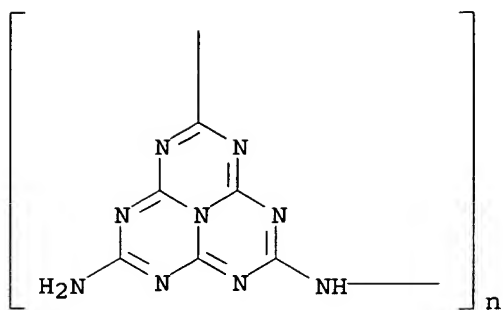


- RN 3576-88-3 CAPLUS
- CN 1,3,5-Triazine-2,4,6-triamine, N-(4,6-diamino-1,3,5-triazin-2-yl)- (9CI)  
 (CA INDEX NAME)



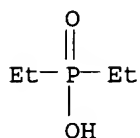
ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

- RN 32518-77-7 CAPLUS
- CN Poly[(8-amino-1,3,4,6,7,9,9b-heptaazaphenalene-2,5-diyl)imino] (8CI, 9CI)  
 (CA INDEX NAME)



RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L79 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:732272 CAPLUS

DOCUMENT NUMBER: 141:226408

TITLE: Fireproofing dispersions for use in plastics

INVENTOR(S): Sicklen, Martin; Knop, Susanne; Hoerold, Sebastian; Bauer, Harald

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Eur. Pat. Appl., 15 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

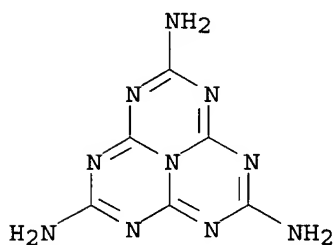
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1454949	A2	20040908	EP 2004-4108	20040224
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10309805	A1	20040923	DE 2003-10309805	20030305
JP 2004269885	A2	20040930	JP 2004-61140	20040304
PRIORITY APPLN. INFO.:			DE 2003-10309805	A 20030305
OTHER SOURCE(S):	MARPAT 141:226408			

ED Entered STN: 09 Sep 2004

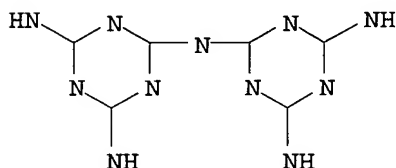
AB The title dispersions, useful in plastic compns. with good processability, contain (di)phosphinate salts of specified composition 1-90, P-N compds. or N-containing synergists 0-75, and liquid components 10-90%. A 25:75 dispersion (viscosity 6300 mPa-s) of Al diethylphosphinate and Alpolit SUP 403BMT (unsatd. polyester) was prepared. A cured, fiber-reinforced plate prepared from this composition had a smooth, homogeneous surface and limiting O index

0.38.

IT 1502-47-2D, Melem, salts with polyphosphoric acids  
 3576-88-3D, Melam, salts with polyphosphoric acids  
 32518-77-7D, Melon, salts with polyphosphoric acids  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (fireproofing dispersions for use in plastics)  
 RN 1502-47-2 CAPLUS  
 CN 1,3,4,6,7,9,9b-Heptaazaphenalene-2,5,8-triamine (9CI) (CA INDEX NAME)

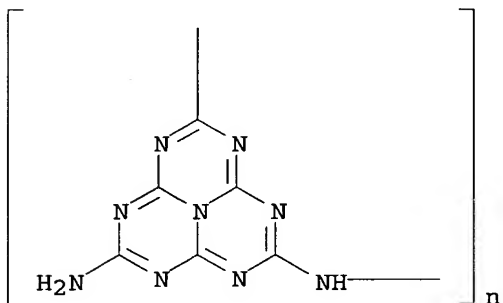


RN 3576-88-3 CAPLUS  
 CN 1,3,5-Triazine-2,4,6-triamine, N-(4,6-diamino-1,3,5-triazin-2-yl)- (9CI)  
 (CA INDEX NAME)

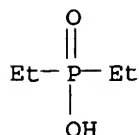


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 32518-77-7 CAPLUS  
 CN Poly[(8-amino-1,3,4,6,7,9,9b-heptaazaphenalene-2,5-diyl)imino] (8CI, 9CI)  
 (CA INDEX NAME)



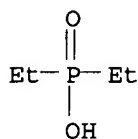
IT 225789-38-8, Aluminum diethylphosphinate  
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
 (fireproofing dispersions for use in plastics)  
 RN 225789-38-8 CAPLUS  
 CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L79 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:200115 CAPLUS  
 DOCUMENT NUMBER: 140:236547  
 TITLE: Compacted flame retardant composition  
 INVENTOR(S): Bauer, Harald; Hoerold, Sebastian; Krause, Werner;  
 Sicken, Martin  
 PATENT ASSIGNEE(S): Clariant GmbH, Germany  
 SOURCE: Eur. Pat. Appl., 19 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1396523	A1	20040310	EP 2003-18726	20030826
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10241376	A1	20040318	DE 2002-10241376	20020906
JP 2004099894	A2	20040402	JP 2003-314473	20030905
PRIORITY APPLN. INFO.:			DE 2002-10241376	A 20020906
OTHER SOURCE(S):	MARPAT 140:236547			
ED	Entered STN: 12 Mar 2004			
AB	Powdered fire retardant compns. based on $\geq 1$ of P-containing compds., minerals, and N-containing compds. for plastics exhibit decreased dusting when compacted optionally in the presence of a compacting aid such as waxes.			
IT	225789-38-8, Aluminum diethylphosphinate RL: MOA (Modifier or additive use); USES (Uses) (compacted powdered fire retardant compns. based on phosphorus-containing compds., minerals or nitrogen-containing compds. and optionally compacting aids with decreased dusting for plastics)			
RN	225789-38-8 CAPLUS			
CN	Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)			



● 1/3 A1

IT 1502-47-2D, Melem, polyphosphoric acid salts

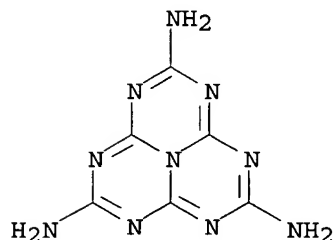
32518-77-7D, Melon, polyphosphoric acid salts

RL: MOA (Modifier or additive use); USES (Uses)

(compacted powdered fire retardant compns. based phosphorus-containing compds., minerals or nitrogen-containing compds. and optionally compacting aids with decreased dusting for plastics)

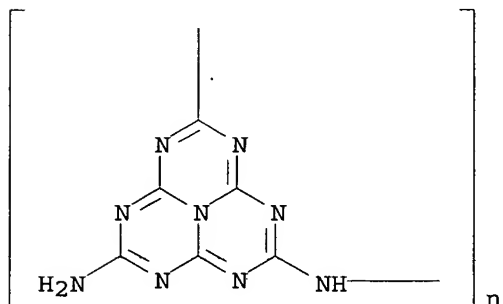
RN 1502-47-2 CAPLUS

CN 1,3,4,6,7,9,9b-Heptaazaphenalene-2,5,8-triamine (9CI) (CA INDEX NAME)



RN 32518-77-7 CAPLUS

CN Poly[(8-amino-1,3,4,6,7,9,9b-heptaazaphenalene-2,5-diyl)imino] (8CI, 9CI)  
(CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L79 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:200114 CAPLUS

DOCUMENT NUMBER: 140:236546

TITLE: Granular fire retardant composition

INVENTOR(S): Bauer, Harald; Hoerold, Sebastian; Krause, Werner; Sicken, Martin

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Eur. Pat. Appl., 15 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

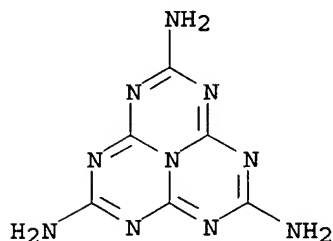
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

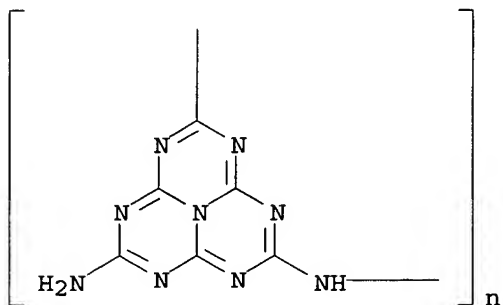
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1396522	A1	20040310	EP 2003-18725	20030826
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

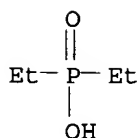
DE 10241375 A1 20040318 DE 2002-10241375 20020906  
 JP 2004099893 A2 20040402 JP 2003-314472 20030905  
 PRIORITY APPLN. INFO.: DE 2002-10241375 A 20020906  
 OTHER SOURCE(S): MARPAT 140:236546  
 ED Entered STN: 12 Mar 2004  
 AB Fire retardant compns. based on a binder and  $\geq 1$  of P-containing  
 compds., minerals, and N-containing compds. exhibit improved dispersion in the  
 granular form in plastics.  
 IT 1502-47-2D, Melem, polyphosphoric acid salts  
 32518-77-7D, Melon, polyphosphoric acid salts  
 225789-38-8, Aluminum diethylphosphinate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (granular fire retardant compns. based on binders and phosphorus-containing  
 compds., minerals or nitrogen-containing compds.)  
 RN 1502-47-2 CAPLUS  
 CN 1,3,4,6,7,9,9b-Heptaazaphenalene-2,5,8-triamine (9CI) (CA INDEX NAME)



RN 32518-77-7 CAPLUS  
 CN Poly[(8-amino-1,3,4,6,7,9,9b-heptaazaphenalene-2,5-diyl)imino] (8CI, 9CI)  
 (CA INDEX NAME)



RN 225789-38-8 CAPLUS  
 CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L79 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:138727 CAPLUS

DOCUMENT NUMBER: 140:182434

TITLE: Dust free, powdered flame retardant composition, procedure for their production and their use, as well as flame retardant polymer molding materials

INVENTOR(S): Bauer, Harald; Hoerold, Sebastian; Krause, Werner; Sicken, Martin

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Ger., 14 pp.

CODEN: GWXXAW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10241374	B3	20040219	DE 2002-10241374	20020906
EP 1396521	A1	20040310	EP 2003-18724	20030826
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004099892	A2	20040402	JP 2003-314471	20030905
US 2005032958	A1	20050210	US 2003-656313	20030905
PRIORITY APPLN. INFO.:			DE 2002-10241374	A 20020906

OTHER SOURCE(S): MARPAT 140:182434

ED Entered STN: 20 Feb 2004

AB A dust free, powdered flame retardant composition, containing salts of P-containing acids

or/and their polymers optionally with synthetic or mineral inorg. compds. and, optionally, N-containing heterocycles, as fireproofing agents and alkyl alkoxylates, natural, modified or synthetic waxes, paraffin and mineral (optionally chlorinated) oil, modified and substituted siloxanes, castor oil, glycerol, di-2-ethylhexyl phthalate, phthalic acid polyester, aromatic and aliphatic esters of phosphoric acid, anionic polyester-polyurethane, polyglycoles as dust reduction additives (optionally added as aqueous suspensions)

is useful for molded plastics, films, threads and fibers. A composition, containing reaction product of melamine polyphosphate (Melapur MP), with aluminum diethylphosphinate and alcoxylated alc. (Genapol 2882) increases fire-resistance of polybutylene terephthalate.

IT 1502-47-2, Melem 3576-88-3, Melam

32518-77-7, Melon

RL: MOA (Modifier or additive use); USES (Uses)

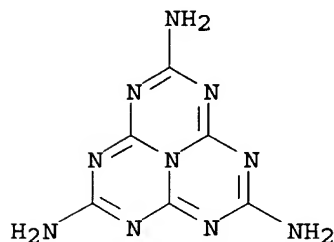
(flame retardant composition for molded plastics, containing salts of phosphinic



or diphosphinic acids or/and their polymers in mixture with inorg. compds. and dust reduction additives)

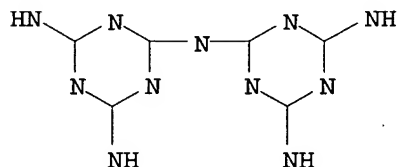
RN 1502-47-2 CAPLUS

CN 1,3,4,6,7,9,9b-Heptaazaphenalene-2,5,8-triamine (9CI) (CA INDEX NAME)



RN 3576-88-3 CAPLUS

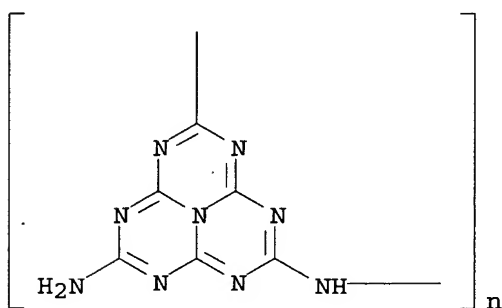
CN 1,3,5-Triazine-2,4,6-triamine, N-(4,6-diamino-1,3,5-triazin-2-yl)- (9CI)  
(CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 32518-77-7 CAPLUS

CN Poly[(8-amino-1,3,4,6,7,9,9b-heptaazaphenalene-2,5-diyl)imino] (8CI, 9CI)  
(CA INDEX NAME)



IT 225789-38-8P, Aluminum diethylphosphinate

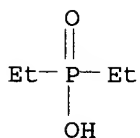
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(flame retardant composition for molded plastics, containing salts of phosphinic

or diphosphinic acids or/and their polymers in mixture with inorg. compds. and, optionally, N-containing heterocycles and dust reduction additives)

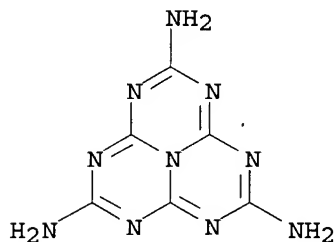
RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)

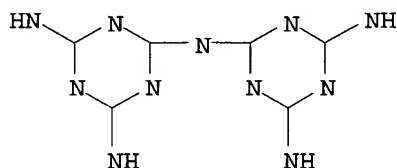


● 1/3 A1

IT 1502-47-2D, Melem, salt with polyphosphoric acid  
 3576-88-3D, Melam, salt with polyphosphoric acid  
 32518-77-7D, Melon, salt with polyphosphoric acid  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (flame retardant composition for molded plastics, containing salts of  
 phosphinic  
 or diphosphinic acids or/and their polymers in mixture with inorg.  
 compds. and, optionally, N-containing heterocycles and dust reduction  
 additives)  
 RN 1502-47-2 CAPLUS  
 CN 1,3,4,6,7,9,9b-Heptaazaphenalene-2,5,8-triamine (9CI) (CA INDEX NAME)

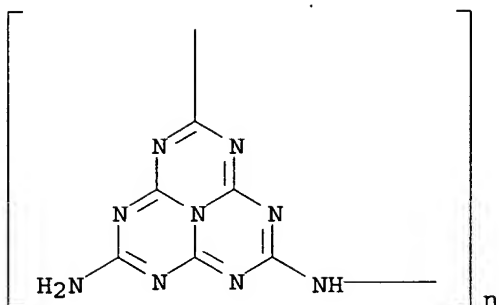


RN 3576-88-3 CAPLUS  
 CN 1,3,5-Triazine-2,4,6-triamine, N-(4,6-diamino-1,3,5-triazin-2-yl)- (9CI)  
 (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 32518-77-7 CAPLUS  
 CN Poly[(8-amino-1,3,4,6,7,9,9b-heptaazaphenalene-2,5-diyl)imino] (8CI, 9CI)  
 (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L79 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:97241 CAPLUS

DOCUMENT NUMBER: 140:147040

TITLE: Flame retardant combination

INVENTOR(S): Schlosser, Elke; Nass, Bernd; Wanzke, Wolfgang

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

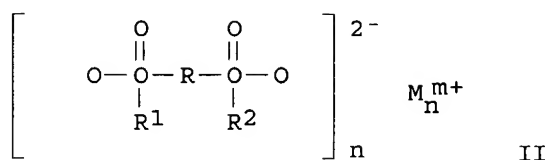
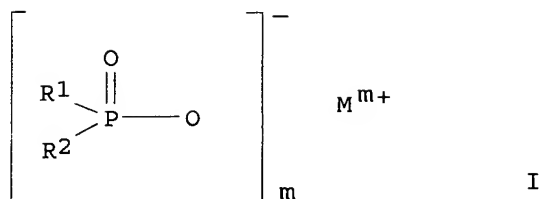
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1386942	A1	20040204	EP 2003-8309	20030410
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004059929	A2	20040226	JP 2003-279189	20030724
PRIORITY APPLN. INFO.:			EP 2002-16642	A 20020725
			EP 2003-8309	A 20030410

OTHER SOURCE(S): MARPAT 140:147040

ED Entered STN: 06 Feb 2004

GI



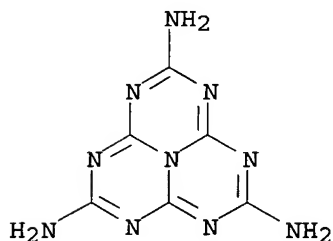
AB The invention relates to a flame retardant combination comprising A, a phosphinate of the formula (I) and/or a diphosphate of the formula (II) and/or polymers of these where R1 and R2 are identical or different and are C1-C6-alkyl, linear or branched, and/or aryl; R3 is C1-C10-alkylene, linear or branched, C6-C10-arylene, -alkyl-arylene or -aryl-alkylene; M is Ca ions, Mg ions, Al ions and/or Zn ions, m is 2 or 3; n is 1 or 3; x is 1 or 2; and comprising a component B1, B2 and/or B3 wherein B1 is a salt of 1,3,5-triazine compound with polyphosphoric acid, and wherein B2 is a melamine polymetaphosphate, and wherein B3 is a composite salt of polyphosphoric acid with melamine, **melam** and/or **melem**.

IT 1502-47-2D, **Melem**, polyphosphoric acid salts  
3576-88-3D, **Melam**, polyphosphoric acid salts  
225789-38-8, Aluminum diethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)  
(combination of metal salts of phosphinates and triazines and polyphosphoric acid as flame retardants for thermoplastic molding materials)

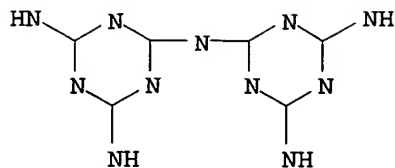
RN 1502-47-2 CAPLUS

CN 1,3,4,6,7,9,9b-Heptaazaphenalene-2,5,8-triamine (9CI) (CA INDEX NAME)



RN 3576-88-3 CAPLUS

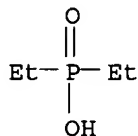
CN 1,3,5-Triazine-2,4,6-triamine, N-(4,6-diamino-1,3,5-triazin-2-yl)- (9CI)  
(CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L79 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:943428 CAPLUS

DOCUMENT NUMBER: 140:17333

TITLE: Halogen-free fire-resistant resin compositions, their manufacture, and their moldings

INVENTOR(S): Harashina, Hatsuhiko; Yamada, Shinya

PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 41 pp.

CODEN: JKXXAF

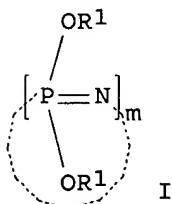
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003342482	A2	20031203	JP 2003-75748	20030319
PRIORITY APPLN. INFO.:			JP 2002-76241	A 20020319
OTHER SOURCE(S):	MARPAT 140:17333			
ED Entered STN: 04 Dec 2003				
GI				



AB The compns. for elec. parts, office automation apparatus, household elec. appliances, machinery parts, etc., are manufactured by mixing (A) base resins, (B) cyclic phosphazene compds. I ( $m = 3-25$ ;  $R_1 = \text{aryl, alkylaryl}$ ; 0.1-100 mol% of  $R_1$  is alkylaryl), linear phosphazene compds.  $X[P(OR_1)_2:N]_nY$  [ $n = 3-10,000$ ;  $X = N:P(OR_1)_3, N:P(O)OR_1$ ;  $Y = P(OR_1)_4, P(O)(OR_1)_2$ ;  $R_1 = \text{same as above}$ ], and/or crosslinked compds. of the cyclic compds. and/or the linear compds., and (C) fireproofing aids of aromatic resins, N compds., inorg. metal compds., S compds., Si compds., and/or P compds. Alternatively, the compns. comprise (a) poly(alkylene arylates) 100, (b) cyclic or linear tolyloxyphosphazenes, cyclic or linear phenoxytolylloxyphosphazenes, and/or their crosslinked compds. 1-80, and (c) fireproofing aids of (1)

salts

with oxo acids or organophosphoric acids, polyphosphoric acid amides, urea compds., and/or tetrazoles, (3) polyvalent metal salts of  $H_3PO_4$ ,  $H_3BO_3$ , and/or stannic acid, (4) organosulfonic acid metal salts, (5) (branched) organosiloxanes, and/or (6) (in)organic P compds. 0.1-500 parts. Thus, a composition containing Duranex [poly(butylene terephthalate)] 100, phenoxytolylloxyphosphazene cyclic trimer and tetramer 15, PMP 200 (melamine **melam melem** polyphosphate salt) 75, an antioxidant 0.5, and a filler 50 parts was injection-molded to give a test piece showing UL-94 fire resistance V-0.

IT 1502-47-2D, **Melem**, polyphosphoric acid salts

3576-88-3D, **Melam**, polyphosphoric acid salts

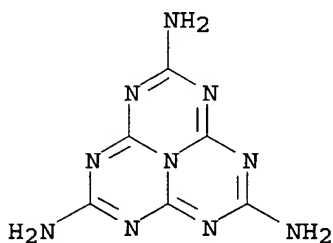
176316-86-2, Aluminum ethylmethylphosphinate

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(fireproofing aid; halogen-free fire-resistant resin compns. containing phosphazenes and fireproofing aids for moldings)

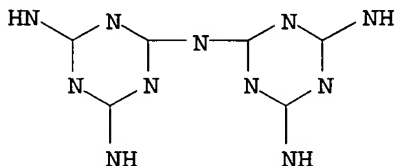
RN 1502-47-2 CAPLUS

CN 1,3,4,6,7,9,9b-Heptaazaphenalene-2,5,8-triamine (9CI) (CA INDEX NAME)



RN 3576-88-3 CAPLUS

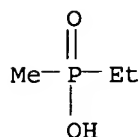
CN 1,3,5-Triazine-2,4,6-triamine, N-(4,6-diamino-1,3,5-triazin-2-yl)- (9CI)  
(CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

L79 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:62409 CAPLUS

DOCUMENT NUMBER: 134:116657

TITLE: Combinations of phosphinic acid derivatives and melamine derivatives for fireproofing agents for thermoplastic polymers

INVENTOR(S): Schlosser, Elke; Nass, Bernd; Wanzke, Wolfgang

PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1070754	A2	20010124	EP 2000-114379	20000705
EP 1070754	A3	20030917		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19933901	A1	20010201	DE 1999-19933901	19990722
US 6255371	B1	20010703	US 2000-617473	20000717
JP 2001072978	A2	20010321	JP 2000-221129	20000721
PRIORITY APPLN. INFO.:			DE 1999-19933901	A 19990722

OTHER SOURCE(S): MARPAT 134:116657

ED Entered STN: 26 Jan 2001

AB Combinations of (a)  $[\text{R}_1\text{R}_2\text{P}(\text{:O})\text{O}]_m\text{-Mm+}$  or  $[\text{OR}_1\text{P}(\text{:O})\text{R}_3\text{P}(\text{:O})\text{R}_2\text{O}]_n\text{-Mxm+}$  ( $\text{R}_1$ ,  $\text{R}_2$  = C1-6 alkyl or aryl;  $\text{R}_3$  = C1-10 alkylene, C6-10 arylene, or C6-10 arylalkylene;  $\text{M}$  = Ca, Mg, Al, or Zn;  $m$  = 2 or 3,  $n$  = 1 or 3,  $x$  = 1 or 2) and (b) melamine (I) condensates, I phosphate, or I condensate- $\text{H}_3\text{PO}_4$  adducts are useful as fireproofing agents for thermoplastic polymers.

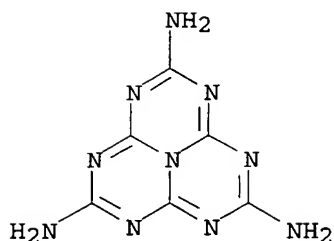
IT 1502-47-2, Melem 1502-47-2D, Melem, salts with polyphosphoric acids 3576-88-3, Melam 3576-88-3D, Melam, salts with polyphosphoric acids 32518-77-7, Melon 225789-38-8, Aluminum diethylphosphinate 284685-45-6, Zinc diethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)

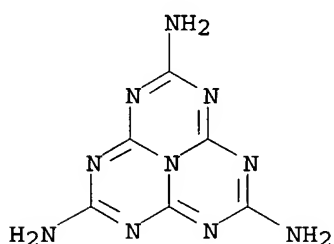
(combinations of phosphinic acid derivs. and melamine derivs. for fireproofing agents for thermoplastic polymers)

RN 1502-47-2 CAPLUS

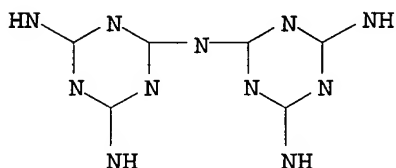
CN 1,3,4,6,7,9,9b-Heptaazaphenalene-2,5,8-triamine (9CI) (CA INDEX NAME)



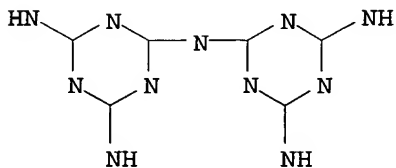
RN 1502-47-2 CAPLUS  
 CN 1,3,4,6,7,9,9b-Heptaazaphenalene-2,5,8-triamine (9CI) (CA INDEX NAME)



RN 3576-88-3 CAPLUS  
 CN 1,3,5-Triazine-2,4,6-triamine, N-(4,6-diamino-1,3,5-triazin-2-yl)- (9CI)  
 (CA INDEX NAME)

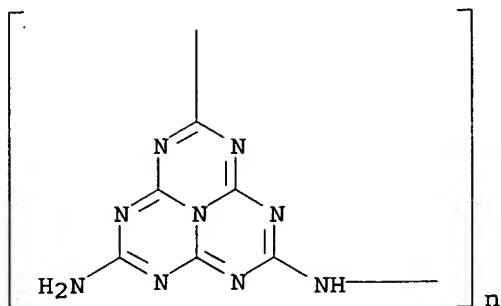


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE  
 RN 3576-88-3 CAPLUS  
 CN 1,3,5-Triazine-2,4,6-triamine, N-(4,6-diamino-1,3,5-triazin-2-yl)- (9CI)  
 (CA INDEX NAME)



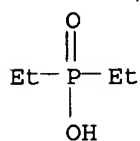
ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE  
 RN 32518-77-7 CAPLUS  
 CN Poly[(8-amino-1,3,4,6,7,9,9b-heptaazaphenalene-2,5-diyl)imino] (8CI, 9CI)  
 (CA INDEX NAME)





RN 225789-38-8 CAPLUS

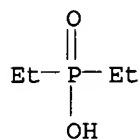
CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

RN 284685-45-6 CAPLUS

CN Phosphinic acid, diethyl-, zinc salt (9CI) (CA INDEX NAME)



● 1/2 Zn

=> d que nos l88

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L12      STR
L13      SCR 2043
L14      SCR 1918
L15 (    1541)SEA FILE=REGISTRY SSS FUL L12 AND (L13 OR L14)
L16 (    1539)SEA FILE=REGISTRY ABB=ON  L15/COMPLETE
L17 (    244)SEA FILE=REGISTRY ABB=ON  L16 AND (CA OR AL OR ZN)/ELS
L18      STR
L19 (    1428)SEA FILE=REGISTRY SUB=L15 SSS FUL L18
L20 (    1426)SEA FILE=REGISTRY ABB=ON  L19/COMPLETE
L21 (    210)SEA FILE=REGISTRY ABB=ON  L20 AND L17
L22 (    114)SEA FILE=REGISTRY ABB=ON  L21 AND NC>1
L23      84 SEA FILE=REGISTRY ABB=ON  L22 AND SALT
L37      133 SEA FILE=CAPLUS ABB=ON  L23
L80      1 SEA FILE=REGISTRY ABB=ON  "MELAMINE PHOSPHATE"/CN
L81      1 SEA FILE=REGISTRY ABB=ON  "DIMELAMINE PHOSPHATE"/CN
L82      1 SEA FILE=REGISTRY ABB=ON  BENZOGUANAMINE/CN
L83      1 SEA FILE=REGISTRY ABB=ON  ALLANTOIN/CN
L84      1 SEA FILE=REGISTRY ABB=ON  GLYCOLURIL/CN
L85      1 SEA FILE=REGISTRY ABB=ON  "MELAMINE CYANURATE"/CN
L86      1 SEA FILE=REGISTRY ABB=ON  DICYANDIAMIDE/CN
L87      11516 SEA FILE=CAPLUS ABB=ON  (L80 OR L81 OR L82 OR L83 OR L84 OR
L85 OR L86)
L88      29 SEA FILE=CAPLUS ABB=ON  L87 AND L37

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=> s l88 not (l28 or l58 or l69) *previously printed*  
 L101 8 L88 NOT (L28 OR L58 OR L69)

=> d ibib ed abs hitstr l101 1-8

L101 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:904009 CAPLUS  
 DOCUMENT NUMBER: 141:366926  
 TITLE: Halogen-free fire-resistant polyamide compositions  
 with good extrudability and processability  
 INVENTOR(S): Goto, Teiji; Iwamoto, Takashi  
 PATENT ASSIGNEE(S): Asahi Kasei Chemical Corporation, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004300189	A2	20041028	JP 2003-92207	20030328
PRIORITY APPLN. INFO.:			JP 2003-92207	20030328

OTHER SOURCE(S): MARPAT 141:366926

ED Entered STN: 29 Oct 2004

AB The compns., useful for elec. and electronic connectors, etc., comprise  
 (A) m-xylyleneadipamide unit-based polyamides 30-85, (B) melamine-H<sub>3</sub>PO<sub>4</sub>  
 adducts 1-15, (C) [R<sub>1</sub>P(O)(R<sub>2</sub>)O]-m.Mm+ and/or [OP(O)(R<sub>1</sub>)R<sub>3</sub>P(O)(R<sub>2</sub>)O]2-nMxm+  
 (R<sub>1</sub>, R<sub>2</sub> = linear or branched C<sub>1</sub>-6 alkyl and/or aryl, Ph; R<sub>3</sub> = linear or  
 branched C<sub>1</sub>-10 alkylene, C<sub>6</sub>-10 arylene, C<sub>6</sub>-10 alkylarylene, C<sub>6</sub>-10  
 arylalkylene; M = Ca, Mg, Al, and/or Zn; m = 2-3; n = 1, 3; x = 1-2) 1-15,  
 and (D) inorg. fillers 5-40%. Thus, MX Nylon 6002 (MXD 6 nylon) 68, PMP  
 100 (melamine polyphosphate) 5, Al ethylmethylphosphinate 7, and CS

03JA-FT756 (glass fiber) 20% were kneaded, pelletized, and extruded or injection molded to give a test piece showing good processability, UL 94 fire resistance rating (1/32 in.) V-0, bending strength 220 MPa, flexural modulus 8.7 GPa, and good appearance and tracking resistance.

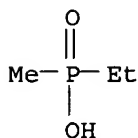
IT 176316-86-2P, Aluminum ethylmethylphosphinate

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(fireproofing agent; halogen-free fire-resistant polyamide compns. with good moldability)

RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

IT 41583-09-9, Melamine phosphate

RL: MOA (Modifier or additive use); USES (Uses)

(fireproofing agent; halogen-free fire-resistant polyamide compns. with good moldability)

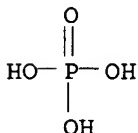
RN 41583-09-9 CAPLUS

CN 1,3,5-Triazine-2,4,6-triamine, phosphate (9CI) (CA INDEX NAME)

CM 1

CRN 7664-38-2

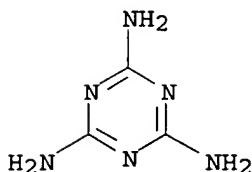
CMF H3 O4 P



CM 2

CRN 108-78-1

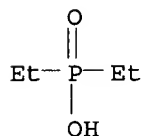
CMF C3 H6 N6



L101 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:876589 CAPLUS  
 DOCUMENT NUMBER: 141:366914  
 TITLE: Flame-retardant polyamide compositions  
 INVENTOR(S): Goto, Teiji; Iwamoto, Takashi  
 PATENT ASSIGNEE(S): Asahi Kasei Chemical Corporation, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004292755	A2	20041021	JP 2003-90274	20030328
PRIORITY APPLN. INFO.:			JP 2003-90274	20030328

OTHER SOURCE(S): MARPAT 141:366914  
 ED Entered STN: 22 Oct 2004  
 AB The compns. which do not generate hydrogen halide gases on firing, have good mech. and elec. properties, and have suppressed bleed out in high-temperature and high-humidity environment comprise (a) polyamides 30-85, (b) addition products of melamine and H<sub>3</sub>PO<sub>4</sub> 1-30, (c) phosphinic acid salts (R<sub>1</sub>R<sub>2</sub>PO<sub>2</sub>)<sub>m</sub>- M<sub>m</sub><sup>+</sup> and/or diphosphonic acid salts (O<sub>2</sub>R<sub>1</sub>PR<sub>3</sub>PR<sub>2</sub>O<sub>2</sub>)<sub>n2</sub>- M<sub>xm</sub><sup>+</sup> (R<sub>1</sub>, R<sub>2</sub> = C<sub>1</sub>-6 alkyl and/or aryl or Ph; R<sub>3</sub> = C<sub>1</sub>-10 alkylene, C<sub>6</sub>-10 arylene, C<sub>6</sub>-10 alkylarylene, C<sub>6</sub>-10 arylalkylene; M = Ca<sup>2+</sup>, Mg<sup>2+</sup>, Al<sup>3+</sup>, and/or Zn<sup>2+</sup>; m = 2, 3; n = 1, 3; x = 1, 2) 1-30, and (d) inorg. fillers 5-40%. Thus, a composition comprising polyamide 66/6I [85/15, prepared from reacting hexamethylenediamine adipate (1:1), hexamethylenediamine isophthalate (1:1), and adipic acid] 60, melamine polyphosphate (PMP 100) 10, 1,2-ethylphosphinic acid Al salt 10, and CS 03JAFT756 (glass fiber) 20% gave test pieces showing UL 94 flame retardance (1/32 in.) V-0, bending strength 180 MPa, bending elasticity 7.5 GPa, and high tracking resistance.  
 IT **225789-38-8P**  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
 (nonhalogen flame-retardant polyamide compns.)  
 RN 225789-38-8 CAPLUS  
 CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



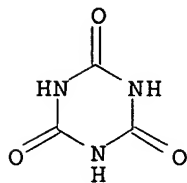
● 1/3 A1

IT **37640-57-6**, MCA-CO **41583-09-9**, Melamine phosphate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (nonhalogen flame-retardant polyamide compns.)  
 RN 37640-57-6 CAPLUS  
 CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 108-80-5

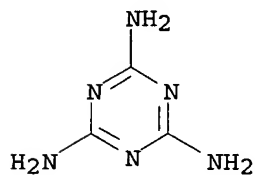
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CM 2

CRN 108-78-1

CMF C3 H6 N6



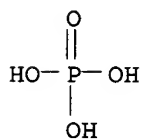
RN 41583-09-9 CAPLUS

CN 1,3,5-Triazine-2,4,6-triamine, phosphate (9CI) (CA INDEX NAME)

CM 1

CRN 7664-38-2

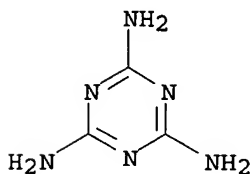
CMF H3 O4 P



CM 2

CRN 108-78-1

CMF C3 H6 N6



L101 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:871170 CAPLUS  
 DOCUMENT NUMBER: 141:350870  
 TITLE: Flame-retardant polyamide compositions having good electrical properties  
 INVENTOR(S): Goto, Teiji; Iwamoto, Takashi  
 PATENT ASSIGNEE(S): Asahi Kasei Chemical Corporation, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004292531	A2	20041021	JP 2003-84504	20030326
PRIORITY APPLN. INFO.:			JP 2003-84504	20030326
OTHER SOURCE(S): MARPAT 141:350870				

ED Entered STN: 21 Oct 2004

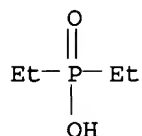
AB The compns. which do not generate hydrogen halide gases on firing, have good mech. and elec. properties, and have suppressed bleed out in high-temperature and high-humidity environment comprise (a) polyamides 30-80, (b) addition products of melamine and H<sub>3</sub>PO<sub>4</sub> 1-30, (c) phosphinic acid salts (R<sub>1</sub>R<sub>2</sub>PO<sub>2</sub>)m- Mm+ and/or diphosphonic acid salts (O<sub>2</sub>R<sub>1</sub>PR<sub>3</sub>PR<sub>2</sub>O<sub>2</sub>)n<sub>2</sub>- Mxm+ (R<sub>1</sub>, R<sub>2</sub> = C<sub>1</sub>-6 alkyl and/or aryl or Ph; R<sub>3</sub> = C<sub>1</sub>-10 alkylene, C<sub>6</sub>-10 arylene, C<sub>6</sub>-10 alkylarylene, C<sub>6</sub>-10 arylalkylene; M = Ca<sup>2+</sup>, Mg<sup>2+</sup>, Al<sup>3+</sup>, and/or Zn<sup>2+</sup>; m = 2, 3; n = 1, 3; x = 1, 2) 1-30, (d) monoesters of polyalkylene polyhydric alcs. and C<sub>10</sub>-30 higher fatty acids 0.01-5, and (e) inorg. fillers 5-40%. Thus, a composition comprising polyamide 66/6I [85/15, prepared from reacting hexamethylenediamine adipate (1:1), hexamethylenediamine isophthalate (1:1), and adipic acid] 58.5, melamine polyphosphate (PMP 100) 10, di-Et phosphinic acid Al salt 10, Emanon 3199 (polyethylene glycol monostearate) 1.5, and CS 03JAFT756 (glass fiber) 20% gave test pieces showing UL 94 flame retardance (1/32 in.) V-0, bending strength 170 MPa, bending elasticity 7.2 GPa, and high tracking resistance.

IT 225789-38-8P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
 (nonhalogen flame-retardant polyamide compns.)

RN 225789-38-8 CAPLUS

CN Phosphinic acid, diethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

IT 37640-57-6, MCA-CO 41583-09-9, Melamine phosphate

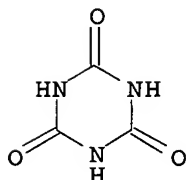
RL: MOA (Modifier or additive use); USES (Uses)  
 (nonhalogen flame-retardant polyamide compns.)

RN 37640-57-6 CAPLUS  
CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 108-80-5

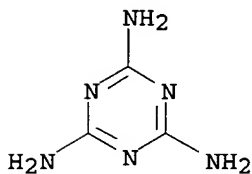
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CM 2

CRN 108-78-1

CMF C3 H6 N6

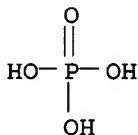


RN 41583-09-9 CAPLUS  
CN 1,3,5-Triazine-2,4,6-triamine, phosphate (9CI) (CA INDEX NAME)

CM 1

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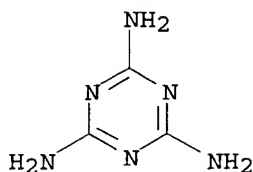
CMF H3 O4 P



CM 2

CRN 108-78-1

CMF C3 H6 N6



L101 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:589612 CAPLUS  
 DOCUMENT NUMBER: 141:141221  
 TITLE: Production method of flame-retardant resin compositions  
 INVENTOR(S): Harashina, Hatsuhiko; Yamada, Shinya  
 PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 130 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004061008	A1	20040722	WO 2003-JP16529	20031224
W: AE, AG, AL, AU, BA, BB, BR, BZ, CA, CN, CO, CR, CU, DM, DZ, EC, EG, GD, GE, HR, ID, IL, IN, IS, JP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, NI, NO, NZ, OM, PG, PH, PL, SC, SG, SY, TN, TT, UA, US, UZ, VC, VN, YU, ZA RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			JP 2002-380575	A 20021227

ED Entered STN: 23 Jul 2004

AB A flame-retardant resin composition comprising a base resin (A), an organophosphorus compound (B) having a unit represented by the general formula [(Y1)(Y2)P(:X1)(Z1)a]b-Ar, and an auxiliary flame retardant (C): (1a) wherein Ar is an aromatic hydrocarbon ring or a nitrogenous aromatic heterocycle; X1 is oxygen or sulfur; Y1 and Y2 are each independently hydrocarbyl, alkoxy, aryloxy, or aralkyloxy; Z1 is alkylene or a nitrogenous divalent group corresponding to alkylamine; Y1 and Y2 together with the adjacent phosphorus atom may form a ring; a is 0 or 1; and b is an integer of 1 to 6.

IT 37640-57-6, MC 610 176316-86-2, Aluminum ethylmethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)  
 (flame-retardant auxiliary; production method of flame-retardant resin compns.)

RN 37640-57-6 CAPLUS

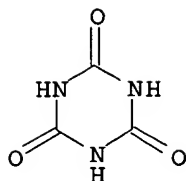
CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 108-80-5

CMF C3 H3 N3 O3

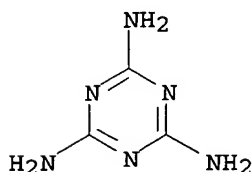




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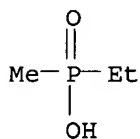
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CMF C3 H6 N6



RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

L101 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:22965 CAPLUS

DOCUMENT NUMBER: 138:74061

TITLE: Flame-retardant polyalkylene arylate-based resin composition

INVENTOR(S): Harashina, Hatsuhiko; Yamada, Shinya; Tada, Yuji

PATENT ASSIGNEE(S): Polyplastics Co., Ltd., Japan

SOURCE: PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003002666	A1	20030109	WO 2002-JP6460	20020627
W: CN, DE, US				
JP 2003082211	A2	20030319	JP 2002-187157	20020627

DE 10296914	T	20040916	DE 2002-10296914	20020627
US 2004147646	A1	20040729	US 2003-477598	20031113
PRIORITY APPLN. INFO.:			JP 2001-195170	A 20010627
			WO 2002-JP6460	W 20020627

ED Entered STN: 10 Jan 2003

AB Titled resin composition with high flame-retardance is composed of 100 parts of polyalkylene arylate, such as PET and PBT, and 10-200 parts of flame-retardant composed of at least one phosphazene compound containing a crosslinked phenoxyphosphazene compound, a polyphenylene oxide resin, and optionally, a styrene resin and/or a nitrogenous compound. Thus, PBT 100, crosslinked phenoxyphosphazene compound prepared from sodium salt of phenol and bisphenol S, and dichlorophosphazene oligomer 35, poly(2,6-dimethyl-1,4-phenylene)oxide resin (YPX 100F) 45, and anti-oxidant 0.5 parts were kneaded at 280° to obtain a flame-retardant resin composition.

IT 37640-57-6, MC 610 176316-86-2, Aluminum

ethylmethylphosphinate

RL: MOA (Modifier or additive use); USES (Uses)

(fireproofing agent; flame-retardant polyalkylene arylate-based resin composition)

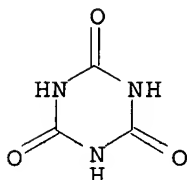
RN 37640-57-6 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 108-80-5

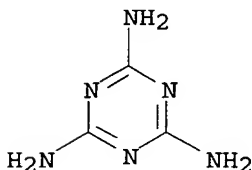
CMF C3 H3 N3 O3



CM 2

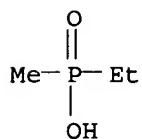
CRN 108-78-1

CMF C3 H6 N6



RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:276071 CAPLUS  
 DOCUMENT NUMBER: 136:295627  
 TITLE: Flame retardant polyamide compositions  
 INVENTOR(S): Steenbakkers-Menting, Henrica Norberta Alberta Maria; Tijssen, Johannes; Tummers, Danieel Joseph Maria  
 PATENT ASSIGNEE(S): DSM N.V., Neth.  
 SOURCE: PCT Int. Appl., 17 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002028953	A1	20020411	WO 2001-NL733	20011004
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
NL 1016340	C2	20020408	NL 2000-1016340	20001005
CA 2424757	AA	20020411	CA 2001-2424757	20011004
AU 2002011088	A5	20020415	AU 2002-11088	20011004
EP 1322702	A1	20030702	EP 2001-979099	20011004
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004510863	T2	20040408	JP 2002-532530	20011004
US 2004021135	A1	20040205	US 2003-380571	20030707
PRIORITY APPLN. INFO.:			NL 2000-1016340	A 20001005
			WO 2001-NL733	W 20011004

ED Entered STN: 12 Apr 2002

AB Invention relates to a halogen-free, flame retarder composition for use in a thermoplastic composition, in particular a glassfibre-reinforced polyamide composition, which flame retarder composition contains (A) at least 10-90% phosphinate compound according to formula  $[R_1P(O(R_2)O)]_mM$  and/or formula  $[OP(OR_1R_3P(OR_2O)]_nMx$  and/or polymers thereof, wherein R1 and R2 = hydrogen, linear or branched C1-6 alkyl, and Ph, R3 = linear or branched C1-10 alkylene, arylene, alkylarylene, and arylalkylene, M = alkaline-earth, alkali, Aluminum, zinc, iron, and 1,3,5-triazine, m = integer 1-3, n = 1 or 3, and

x = 1 or 2, (B) 90-10% polyphosphate salt of a 1,3,5-triazine compound according to formula  $H[O:O(O-TH^+)P]mOH$  and 0-30% olefin copolymer, wherein T = 1,3,5-triazine and n = number average condensation >3, and 0-30% olefin copolymer. When used as a flame retarder in glassfibre-reinforced compns. the halogen-free flame retardant composition results in a combination of a V-0 rating according to the UL 94 test of Underwriters Labs. and excellent mech. properties. The invention therefore also relates to the use of this flame retarder composition as a flame retarder in a polyamide composition, and

a

flame retardant polyamide composition that contains the flame retarder composition

The invention also relates to a molded article containing the flame retardant polyamide composition, and the use thereof in the field of elec. and electronic applications.

IT 37640-57-6, Melamine cyanurate

RL: MOA (Modifier or additive use); USES (Uses)

(fireproofing agent, Melapur MC 50; flame retardant polyamide compns.)

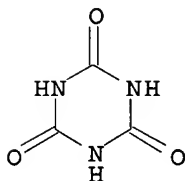
RN 37640-57-6 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 108-80-5

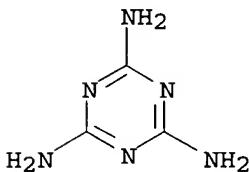
CMF C3 H3 N3 O3



CM 2

CRN 108-78-1

CMF C3 H6 N6



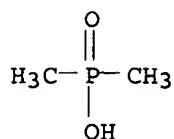
IT 10431-74-0, Zinc dimethyl phosphinate 25789-24-6, Aluminum dimethyl phosphinate

RL: MOA (Modifier or additive use); USES (Uses)

(fireproofing agent; flame retardant polyamide compns.)

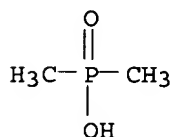
RN 10431-74-0 CAPLUS

CN Phosphinic acid, dimethyl-, zinc salt (7CI, 8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

RN 25789-24-6 CAPLUS  
 CN Phosphinic acid, dimethyl-, aluminum salt (8CI, 9CI) (CA INDEX NAME)



● 1/3 Al

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:819445 CAPLUS

DOCUMENT NUMBER: 132:64954

TITLE: Fire-resistant polyester-based moulding materials and their use

INVENTOR(S): Klatt, Martin; Nam, Michael; Fisch, Herbert

PATENT ASSIGNEE(S): Basf A.-G., Germany

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9967326	A1	19991229	WO 1999-EP4024	19990611
W: AL, AU, BG, BR, BY, CA, CN, CZ, GE, HU, ID, IL, IN, JP, KR, KZ, LT, LV, MK, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, UA, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19827845	A1	19991230	DE 1998-19827845	19980623
AU 9947713	A1	20000110	AU 1999-47713	19990611
PRIORITY APPLN. INFO.:			DE 1998-19827845	A 19980623
			WO 1999-EP4024	W 19990611

ED Entered STN: 30 Dec 1999

AB Fire-resistant thermoplastic molding materials comprise (A) polyester 5-96, (B) nitrogen compound 1-30, (C) inorg. phosphorus compound 1-30, (D) organic phosphorus compound 1-30, (E) at least one ester or amide of saturated or

or unsatd. aliphatic C10-40-carboxylic acids with C2-40-aliphatic saturated alcs.

amines 0-5, and (F) other additives 0-60%. The compns. meet the UL 94 fire requirement and have improved processing properties.

IT 37640-57-6, Melamine cyanurate 176316-86-2

RL: MOA (Modifier or additive use); USES (Uses)  
(in fire-resistant polyester compns.)

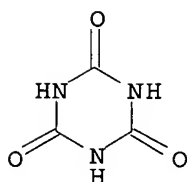
RN 37640-57-6 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 108-80-5

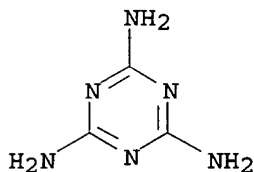
CMF C3 H3 N3 O3



CM 2

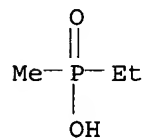
CRN 108-78-1

CMF C3 H6 N6



RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 A1

REFERENCE COUNT:

6

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

Searched by Barb O'Bryen, STIC 2-2518

ACCESSION NUMBER: 1997:700020 CAPLUS  
 DOCUMENT NUMBER: 127:332284  
 TITLE: Synergistic flame retardant combination for polymers, especially polyesters  
 INVENTOR(S): Jenewein, Elke; Kleiner, Hanss-Jerg; Wanzke, Wolfgang; Budzinsky, Winfried  
 PATENT ASSIGNEE(S): Hoechst A.-G., Germany  
 SOURCE: Ger. Offen., 6 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19614424	A1	19971016	DE 1996-19614424	19960412
CA 2250995	AA	19971023	CA 1997-2250995	19970402
WO 9739053	A1	19971023	WO 1997-EP1664	19970402
W: AU, CA, JP, KR, NO, SG, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9722939	A1	19971107	AU 1997-22939	19970402
AU 711202	B2	19991007		
EP 892829	A1	19990127	EP 1997-915478	19970402
EP 892829	B1	20040922		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2000508365	T2	20000704	JP 1997-536693	19970402
AT 277116	E	20041015	AT 1997-915478	19970402
TW 426724	B	20010321	TW 1997-86104597	19970410
ZA 9703104	A	19971013	ZA 1997-3104	19970411
NO 9804726	A	19981130	NO 1998-4726	19981009
NO 311180	B1	20011022		
KR 2000005491	A	20000125	KR 1998-708276	19981012
US 6365071	B1	20020402	US 1999-171031	19990129
PRIORITY APPLN. INFO.:			DE 1996-19614424	A 19960412
			WO 1997-EP1664	W 19970402

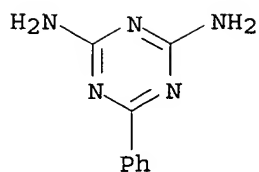
ED Entered STN: 07 Nov 1997

AB The title combination comprises (a) Ca, Zn, or preferably Al phosphinates [R1R2P(O)O]m-M+m (R1, R2 = C1-6 alkyl, Ph; M = Ca, Al, Zn; m = 2, 3) and/or their polymers [OP(O)ZOP(O)R2O]n2-Mxm+ (Z = C1-10 alkylene, C6-10 arylene, alkylarylene, arylalkylene; n = 1, 3; x = 1, 2; R1, R2, M as above), and (b) a specified triazine, allantoin, or glycoluril derivative. For example, samples injection-molded from Celanex 2300 GV 1/30 [glass fiber-reinforced poly(butylene terephthalate)] containing Al ethylmethylphosphinate (I) 10, melamine cyanurate (II) 5, Hostanox O-10 (antioxidant) 0.15 and Hostanox PAR-24 (antioxidant) 0.2% had UL 94 rating V0, vs. V1 for similar samples containing I 15, Hostanox O-10 0.15, Hostanox PAR-24 0.2% and no II.

IT 91-76-9, Benzoguanamine 97-59-6, Allantoin  
 496-46-8 37640-57-6, Melamine cyanurate  
 41583-09-9, Melamine phosphate 56974-60-8, Dimelamine phosphate 176316-86-2, Aluminum ethylmethylphosphinate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (synergistic flame retardant combination for polymers containing)

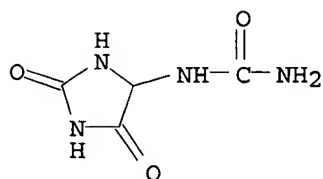
RN 91-76-9 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, 6-phenyl- (9CI) (CA INDEX NAME)



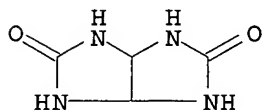
RN 97-59-6 CAPLUS

CN Urea, (2,5-dioxo-4-imidazolidinyl)- (9CI) (CA INDEX NAME)



RN 496-46-8 CAPLUS

CN Imidazo[4,5-d]imidazole-2,5(1H,3H)-dione, tetrahydro- (9CI) (CA INDEX NAME)



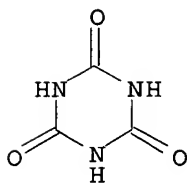
RN 37640-57-6 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 108-80-5

CMF C3 H3 N3 O3

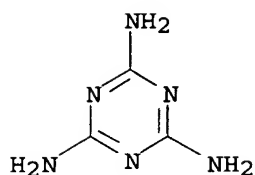


CM 2

CRN 108-78-1

CMF C3 H6 N6



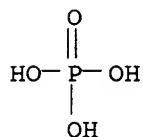


RN 41583-09-9 CAPLUS  
CN 1,3,5-Triazine-2,4,6-triamine, phosphate (9CI) (CA INDEX NAME)

CM 1

CRN 7664-38-2

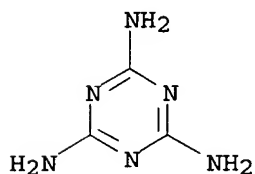
CMF H3 O4 P



CM 2

CRN 108-78-1

CMF C3 H6 N6

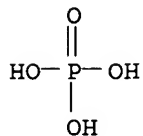


RN 56974-60-8 CAPLUS  
CN 1,3,5-Triazine-2,4,6-triamine, phosphate (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 7664-38-2

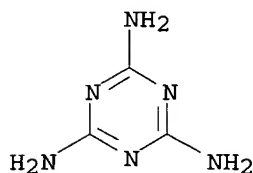
CMF H3 O4 P



CM 2

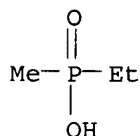
CRN 108-78-1

CMF C3 H6 N6



RN 176316-86-2 CAPLUS

CN Phosphinic acid, ethylmethyl-, aluminum salt (9CI) (CA INDEX NAME)



● 1/3 Al

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L12 STR  
 L13 SCR 2043  
 L14 SCR 1918  
 L15 ( 1541)SEA FILE=REGISTRY SSS FUL L12 AND (L13 OR L14)  
 L16 ( 1539)SEA FILE=REGISTRY ABB=ON L15/COMPLETE  
 L17 ( 244)SEA FILE=REGISTRY ABB=ON L16 AND (CA OR AL OR ZN)/ELS  
 L18 STR  
 L19 ( 1428)SEA FILE=REGISTRY SUB=L15 SSS FUL L18  
 L20 ( 1426)SEA FILE=REGISTRY ABB=ON L19/COMPLETE  
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 L22 ( 114)SEA FILE=REGISTRY ABB=ON L21 AND NC>1  
 L23 84 SEA FILE=REGISTRY ABB=ON L22 AND SALT  
 L37 133 SEA FILE=CAPLUS ABB=ON L23  
 L71 336 SEA FILE=REGISTRY ABB=ON H N O P/ELF AND 4/ELC.SUB  
 L72 1637 SEA FILE=CAPLUS ABB=ON L71  
 L73 0 SEA FILE=CAPLUS ABB=ON L72 AND L37

*claim 21*

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